

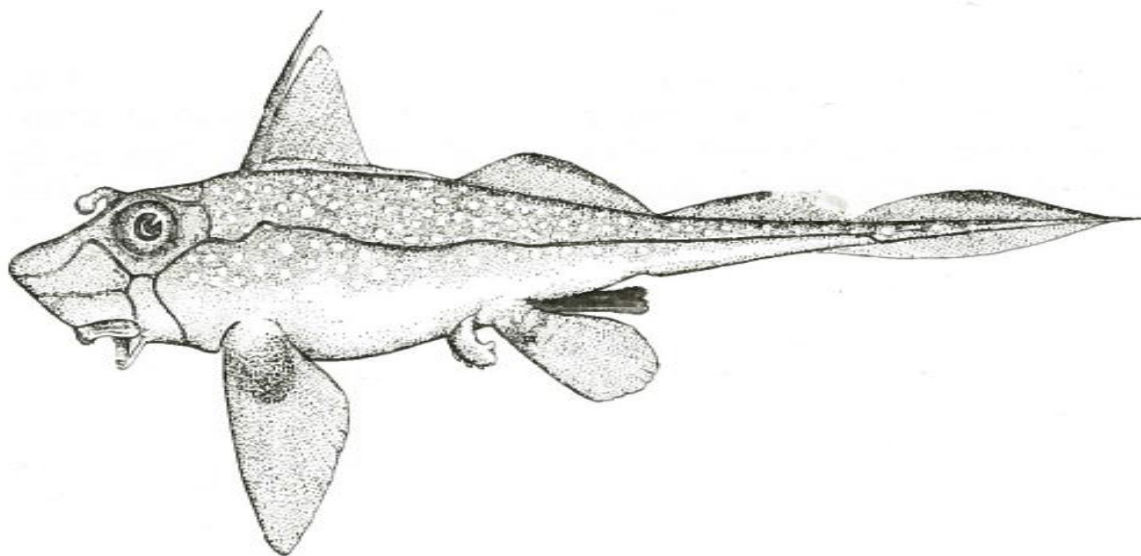
PACIFIC REGION

**INTEGRATED FISHERIES
MANAGEMENT PLAN**

GROUND FISH

EFFECTIVE FEBRUARY 21, 2016

VERSION 1.3



Spotted Ratfish (*Hydrolagus collicii*)



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Canada

This Harvest Plan is intended for general purposes only. Where there is a discrepancy between the Harvest Plan and the regulations, the regulations are the final authority. A description of Areas and Subareas referenced in this Harvest Plan can be found in the Pacific Fishery Management Area Regulations.

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FOREWORD

The purpose of this Integrated Fisheries Management Plan (IFMP) is to identify the main objectives and requirements for the Groundfish fishery in the Pacific Region, as well as the management measures that will be used to achieve these objectives. This document also serves to communicate the basic information on the fishery and its management to Fisheries and Oceans Canada (DFO) staff, legislated co-management boards and other stakeholders. This IFMP provides a common understanding of the basic “rules” for the sustainable management of the fisheries resource.

This IFMP is not a legally binding instrument which can form the basis of a legal challenge. The IFMP can be modified at any time and does not fetter the Minister's discretionary powers set out in the *Fisheries Act*, *Species At Risk Act*, and *Oceans Act*. The Minister can, for reasons of conservation or for any other valid reasons, modify any provision of the IFMP in accordance with the powers granted pursuant to the *Fisheries Act*, *Species At Risk Act*, and *Oceans Act*.

Where DFO is responsible for implementing obligations under land claims agreements, the IFMP will be implemented in a manner consistent with these obligations. In the event that an IFMP is inconsistent with obligations under land claims agreements, the provisions of the land claims agreements will prevail to the extent of the inconsistency.

This IFMP is a living document that will be subjected to a review every two years for updates, with input from interested parties. Any changes required within a given fishing season will continue to be made as needed.

IFMP documents are available from the DFO Pacific Region Internet site:
<http://www.pac.dfo-mpo.gc.ca/fm-gp/ifmp-eng.html>.

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1. OVERVIEW OF THE FISHERY

1.1. History

Each year Fisheries and Oceans Canada provides opportunities to First Nations for food, social and ceremonial (FSC) purposes (or domestic purposes for First Nations with modern treaties), and the commercial and recreational fisheries to harvest groundfish. First Nations, recreational, and commercial fisheries on the Pacific Coast of Canada have long harvested groundfish. Groundfish serve as a source of food, they provide jobs, income, and enjoyment for individuals, businesses, and coastal communities, and they play key roles in natural ecosystems.

1.2. Type of Fishery and Participants

1.2.1. First Nations

In the 1990 Sparrow decision, the Supreme Court of Canada found that where an Aboriginal group has an Aboriginal right to fish for FSC purposes, it takes priority, after conservation, over other uses of the resource. Fisheries are authorized via a Communal Licence issued by the Department under the Aboriginal Communal Fishing Licences Regulations.

In addition to fishing opportunities for FSC purposes (or domestic purposes for treaty First Nations), DFO acknowledges that in *Ahousaht et al. v. Canada and British Columbia*, the courts have found that five Nuu-chah-nulth First Nations located on the West Coast of Vancouver Island - Ahousaht, Ehattesaht, Hesquiaht, Mowachaht/Muchalaht, and Tla-o-qui-aht - (the T'aaq-wiihak Nations), have "aboriginal rights to fish for any species of fish within their Fishing Territories and to sell that fish, with the exception of geoduck". The Department is working with the T'aaq-wiihak Nations pursuant to the direction from the courts, to find "the manner in which the plaintiffs' rights can be accommodated and exercised without jeopardizing Canada's legislative objectives and societal interests in regulating the fishery."

The Department is currently considering fishing opportunities for the Nations for the 2016-2017 season, including a Lingcod gang troll demonstration fishery. Development of a demonstration fishery is part of the broader work to implement a proposal by DFO to provide the T'aaq-wiihak Nations the opportunity to participate in both general commercial fisheries and "preferred means" fisheries. The demonstration fishery is proposed to test elements of preferred means fishing.

Location: Within the T'aaq-wiihak First Nations' Fishing Territories, as described by the courts (found on the West Coast of Vancouver Island, within Areas 24/124, 25/125, and portions of 26/126).

Gear type: Gang troll gear.

Time frame: Consistent with the season dates for the commercial Lingcod fishery. Exact

dates will be determined based on further discussion.

Allocation: It is anticipated that the allocation for the demonstration fishery would draw on commercial Lingcod quota allocated to T'aaq-wiihak Nations.

Monitoring plan: Monitoring and fishery reporting requirements will be developed in conjunction with the Nations and will be informed by the risk-based approach described in DFO's "Strategic Framework for Fishery Monitoring and Catch Reporting in the Pacific Fisheries".

It is anticipated that discussions will be ongoing. Where the Department and the T'aaq-wiihak Nations reach agreement on fisheries for 2016-2017 the Department will amend this IFMP, if necessary, such that the IFMP is consistent with the agreed-to approach for the T'aaq-wiihak fishery.

1.2.2. Recreational

A recreational fishery may occur where authorized by a valid Tidal Waters Sport Fishing licence, which is required for the recreational harvest of all species of fish. Approximately 300,000 Tidal Waters Sport Fishing licences are sold each year. Tidal Waters Sport Fishing Licences can be purchased online by using the DFO website:

<http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/index-eng.htm>.

1.2.3. Commercial

There are seven distinct commercial groundfish sector groups: Groundfish trawl, Halibut, Sablefish, Inside Rockfish, Outside Rockfish, Lingcod, and Dogfish fisheries that are managed separately according to the measures set out in this management plan. The management of these sector groups is integrated, with all groups subject to 100% at-sea monitoring and 100% dockside monitoring, individual vessel accountability for all catch (both retained and released), individual transferable quotas (ITQ), and reallocation of these quotas between vessels and fisheries to cover catch of non-directed species. There are approximately 300 active commercial groundfish vessels. Information on licenced vessels is available online at the DFO website: <http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.htm>.

First Nations have communal access to commercial opportunities through communal commercial licenses acquired through the Allocation Transfer Program (ATP) and Pacific Integrated Commercial Fisheries Initiative (PICFI). The Maa-nulth have an allocation for commercial groundfish fishing outside of the Treaty as identified in the "Maa-nulth First Nation Harvest Agreement". The allocations in the Harvest Agreement do not affirm aboriginal or Treaty rights. These licenses are fished in a manner that is comparable to the general commercial fishery.

1.2.4. Aquaculture

The aquaculture industry may apply to access, by scientific licence, the wild groundfish resource to assist industry broodstock development (growth and diversification). There

are currently two aquaculture operations that have been issued scientific licences to access wild sablefish for broodstock. More information on the sablefish broodstock access can be found in Appendix 8 to this IFMP.

1.3. Location of Fishery

This Integrated Fisheries Management Plan (IFMP) addresses groundfish fisheries occurring in waters of the Pacific Ocean off the west coast of Canada.

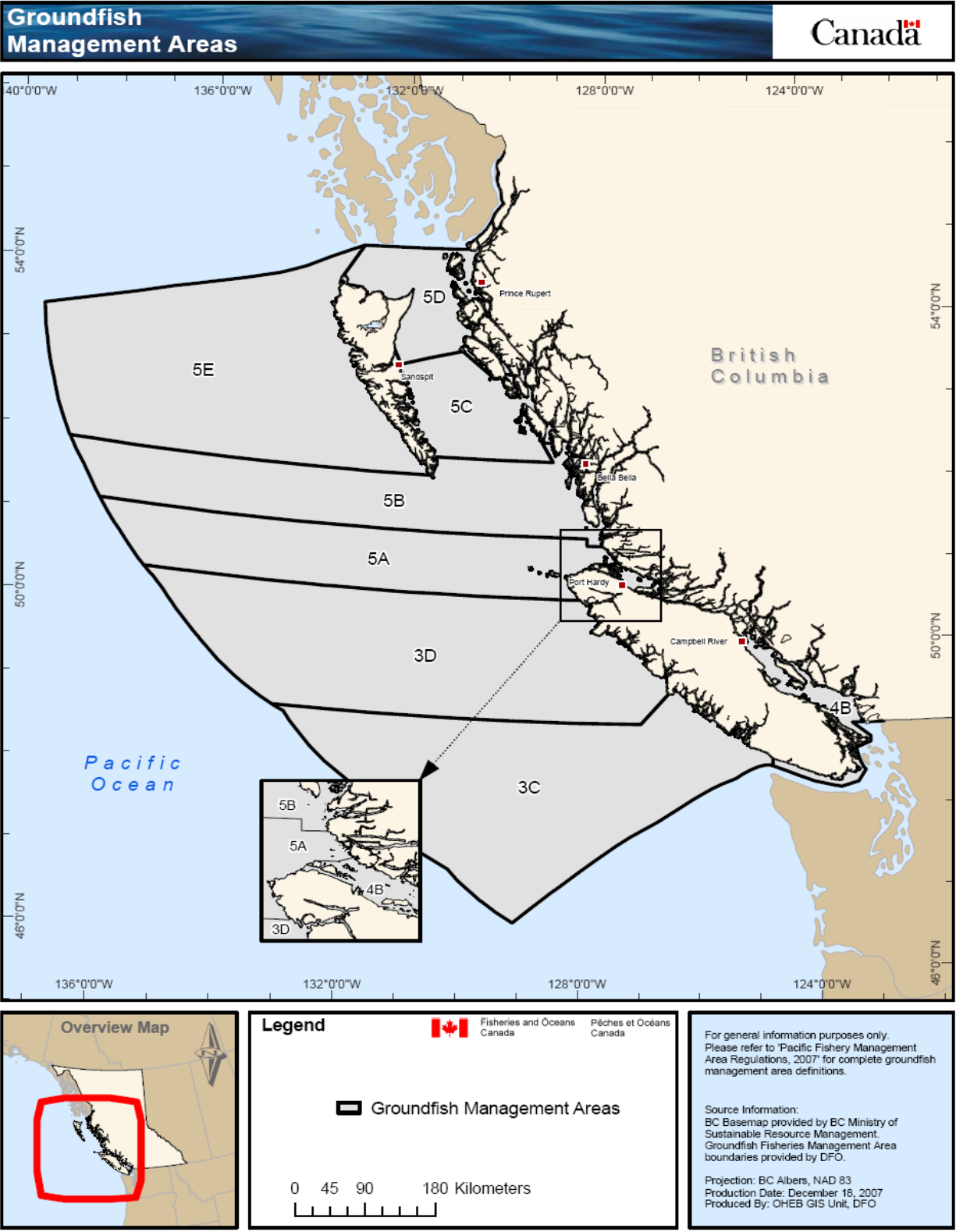
1.4. Commercial Fishing Areas

Name	Area/Subarea
3C	Areas 21, 23, 24, 121, 123, and Subareas 124-1 to 124-3 and 125-6.
3D	Areas 25, 26, 126 and Subareas 27-2 to 27-11, 124-4, 125-1 to 125-5, 127-1 and 127-2.
4B	Areas 13 to 20, 28 and 29 and Subareas 12-1 to 12-13, 12-15 to 12-48.
5A	Areas 11, 111 and Subareas 12-14, 27-1, 127-3, 127-4 and 130-1.
5B	Areas 7 to 10, 108 to 110 and Subareas 102-3, 107-2, 107-3, 130-2 and that portion of 130-3 that lies south of the parallel passing through 51 degrees, 56 minutes north latitude)
5C	Areas 6, 106 and Subareas 2-1 to 2-19, 102-2 and 105-2 and 107-1.
5D	Areas 3 to 5, 103, 104 and Subareas 1-2 to 1-5 and 101-4 to 101-10, 102-1 and 105-1.
5E	Area 142 and Subareas 1-1 and 2-31 to 2-100 and 101-1 to 101-3 and that portion of Subarea 130-3 that lies north of the parallel passing through 51 degrees 56 minutes north latitude

Specific information on the management area boundary descriptions (latitudes and longitudes) can be found in the *Pacific Fishery Management Area Regulations, 2007* (SOR/2007-77). These regulations can be found at:

<http://laws-lois.justice.gc.ca/eng/regulations/SOR-2007-77/index.html>.

1.4.1. Commercial Groundfish Management Area Map



1.5. Governance

- The *Fisheries Act* and the regulations made thereunder.
 - Areas and Subareas, as described in the *Pacific Fishery Management Area Regulations*, are referenced in describing Groundfish Management Areas.
 - Fishery (General) Regulations (i.e. Conditions of Licence) and the *Pacific Fishery Regulations, 1993* (i.e. open times).
 - The *British Columbia Sport Fishing Regulations* (1996).
 - The *Aboriginal Communal Fishing Licences Regulations* (1993).
- The *Oceans Act*.
- The *Species at Risk Act*.

DFO regularly works with fishery participants, Aboriginal groups, Provinces and Territories, and other stakeholders in reviewing and renewing its policy frameworks in support of a sustainable and economically viable fishery. These initiatives are designed to support DFO's vision of a credible, science-based, affordable and effective fisheries program, which contributes to the sustainable wealth of Canadians.

Current projects include:

- the expansion of efforts to manage fisheries using multi-year science advice and multi-year management plans incorporating harvest levels and other primary management measures;
- the requirement for all fishers to cover business costs related to tags and logbooks where they are deemed an ongoing requirement (in line with the policy that those who benefit from the use of the resource be required to assist in paying for the management of the resource);
- the implementation of a suite of services to the fishing industry including online purchasing and renewal of commercial fishing licensing services, issuance of licence conditions, approval of designations and quota transfers; and,
- legislative and policy changes with regard to use of fish or fishing gear to fund joint project agreements.

In addition to the initiatives and legislation changes summarized above, the Department's Sustainable Fisheries Framework comprises the following policy instruments for adopting an ecosystem based approach to fisheries management, including:

- A Fishery Decision-Making Framework Incorporating the Precautionary Approach;
- Policy for Managing the Impact of Fishing on Benthic Habitat, Communities and Species;
- Policy on Managing Bycatch
- Guidance on the Policy on Managing Bycatch
- Ecological Risk Assessment Framework for Cold Water Corals and Sponge Dominated Communities
- Guidance for the Development of Rebuilding Plans under the Precautionary Approach Framework: Growing Stocks out of the Critical Zone

- Policy on New Fisheries for Forage Species

Along with existing economic and shared stewardship policies, these will help the Department meet objectives for long-term sustainability, economic prosperity, and improved governance. Further information can be found at the DFO website:

<http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm>.

Several advisory committees and subcommittees have been established to provide advice to the Department on management of groundfish fisheries. Terms of reference, membership and meeting minutes for the Halibut Advisory Board (HAB), Groundfish Trawl Advisory Committee (GTAC), Sablefish Advisory Committee (SAC), Groundfish Hook and Line Sub-Committee (GHLAC), the Commercial Industry Caucus (CIC), and the Groundfish Integrated Advisory Board (GIAB) can be found on the Internet at:

<http://www.pac.dfo-mpo.gc.ca/consultation/ground-fond/index-eng.html>. For a list of members please see Appendix 11.

DFO engages in a variety of consultation, engagement and collaborative harvest planning processes with First Nations which advise DFO on groundfish management. These exchanges and involvement may include bilateral consultations, advisory processes, management boards, technical groups and other roundtable forums. Consulting is an important part of good governance, sound policy development and decision-making. It is also a component of modern treaties established between First Nations and the provincial and federal governments. In addition to good governance objectives, Canada has statutory, contractual and common law obligations to consult with Aboriginal groups.

In addition, the Sport Fishing Advisory Board provides advice to the Department on matters relating to the recreational fishery. More information on this advisory board can be found on the Internet at: <http://www.pac.dfo-mpo.gc.ca/consultation/smon/sfab-ccps/index-eng.html>.

1.6. Approval Process

The Regional Director General for the Pacific Region approves this plan.

2. MANAGEMENT ISSUES

The Department's Groundfish Management Unit (GMU) has identified key issues facing the groundfish fisheries overall, as informed by consultations with interested parties. Groundfish management issues can be categorized under one of the following themes: science, catch monitoring and reporting, access and allocation, marine planning and governance. These key management issues informed the fisheries management objectives that follow in the subsequent sections. Since the establishment of these issues in the 2011 - 2013 IFMP, numerous subsequent discussions with the Groundfish Integrated Advisory Board (GIAB) and through other processes have reaffirmed these same key issues. Groundfish fisheries are defined as those fisheries that harvest for commercial,

recreational, and food, social and ceremonial¹ purposes. The term “user groups” refer to all interests engaged in the harvest of groundfish resources.

3. RESOURCE MANAGEMENT GOAL

The resource management goal for groundfish is to ensure the sustainable use of the groundfish resource. Each of the objectives described below, in some form, help to achieve this goal in the long term.

4. LONG TERM OBJECTIVES

The management issues identified in section 2 formed the basis for the development of the following long term objectives. The long term objectives were developed for the 2011-2013 Groundfish IFMP and remain relevant for this IFMP. These longer term objectives are supported by short term objectives that are described in the next section. Objectives must be specific, measurable, attainable, relevant and time-bound (SMART). The long term objectives are as follows:

1. By 2017, identify and begin to acquire the necessary data required to provide science advice for all groundfish species identified in the DFO groundfish stock assessment strategic plan.
2. By 2017, pursue accountability for total groundfish mortality (retained and released catch) for all user groups supported by scientifically defensible (accurate and precise) catch monitoring programs.
3. By 2017, have an agreed upon process to aid in the development of allocation arrangements between user groups for groundfish species in the future.
4. By 2017, develop the infrastructure to collect and analyze data to determine economic viability and social impacts of the various groundfish fisheries.

5. SHORT TERM OBJECTIVES

Short term objectives were last renewed for the 2013 – 2014 IFMP. Following a review of those objectives with input from GIAB and the public, they have been updated; those that were complete have been removed from this list and those with work underway have been updated or maintained on the list below. Several new short-term objectives have been added that build upon the work done to date and reflect priorities for 2015-2017. This does not preclude additional short term objectives to be included in subsequent iterations of the IFMP. Current short-term objectives are as follows:

¹ This includes domestic fisheries where modern treaties exist.

1. By the end of 2016, work with GIAB sectors to identify their priority groundfish science and fisheries management projects, including those proposed for funding through alternative mechanisms (e.g., joint project agreements consistent with the use-of-fish policy, user fee amendments, etc).
2. By the end of 2016, evaluate approaches used in other jurisdictions for selecting assessment tools for data-limited species. Use computer simulation to assess the applicability and performance of these approaches in the BC groundfish fishery.
3. By the end of 2015, develop an inventory of current FSC groundfish catch monitoring programs and a pilot catch monitoring risk assessment for an FSC groundfish fishery.
4. By the end of 2016, initiate development of tools for the recreational fishery to improve reporting of all catch (retained and released).
5. By the end of 2016, initiate development of tools for First Nations fisheries to improve reporting of all catch (retained and released).
6. By the end of 2017, use the GIAB to develop the appropriate consultative approach that would support achieving long term objective number 3.
7. By the end of 2016, update the Fleet Financial report.
8. By early 2016, complete a review of the sales slip program to inform a long-term plan for effectively gathering-species level price information for the region.

6. STOCK ASSESSMENT AND STATUS

6.1. Biological Synopsis

In addition to work directed at providing stock assessments, DFO staff conduct routine data collection and compilation and specialized research on the general biology of groundfish in support of stock assessment. The routine work includes:

- Collection and archiving of catch data from fisher logs, observer and electronic logs and unloading slips.
- Collection of biological specimen data from dockside, at-sea and research cruise sampling.
- Archiving of biological data collected from departmental and contract sources.

6.2. Aboriginal Traditional Knowledge/Traditional Ecological Knowledge

Aboriginal Traditional Knowledge/Traditional Ecological Knowledge in the form of observations and comments provided by First Nations is considered in management decisions when provided.

6.3. Stock Assessment and Science Advice

6.3.1. Groundfish Stock Assessment Program

Stock assessment and research programs involving groundfish are conducted by the Department and through cooperative research programs carried out in conjunction with industry associations. Stock assessment advice has been provided for over 30 commercially exploited groundfish stocks. Science personnel, in association with DFO fishery managers and groundfish user group representatives, establish assessment priorities and timing schedules for assessments. These programs are intended to support ongoing evaluation of management measures. Opportunities for stakeholder involvement and co-operative ventures in research and assessment activities are pursued.

The 2011 – 2013 groundfish IFMP identified the prioritization and scheduling of groundfish stock assessments as an objective to be completed by 2013. DFO Science drafted a discussion paper titled “Prioritization and Scheduling of Groundfish Stock Assessments” outlining a process for this as well as a proposed assessment schedule for the 10-year period commencing 2012. The draft discussion paper was reviewed with the Groundfish Integrated Advisory Board in the spring of 2012 and was revised and completed shortly after.

The document, and the process it describes, is intended to inform work-planning for the Science Branch Groundfish Section and its research collaborators and interested parties. It focuses on that portion of the Section’s workload that relates to the production of single species stock assessments. A review of the prioritization and schedule is planned for every five years, although yearly adjustments will be made as needed. The document includes:

- a groundfish species frame of more than 200 species that Science suggests fall within the research mandate of the Groundfish Section (GFS) of the DFO Science Branch, Pacific Region, and for which a stock assessment might be requested;
- a recommended separation of the frame into higher priority (Type A) and lower priority (Type B) species;
- a screening of the Type B species to identify a short list which should receive more assessment work for the 2012-2021 period;
- a draft assessment schedule of the Type A and selected Type B species for the 2012-2021 period;
- a consultative process for conducting the prioritizing and scheduling.

Current and historical science advice, stock assessments and research program reports are available through the Canadian Science Advisory Secretariat (CSAS) (see section 6.3.2).

6.3.2. Canadian Science Advisory Secretariat

Science is the basis for sound decision making and DFO Science Sector provides information on the consequences of management and policy options, and the likelihood of achieving policy objectives under alternative management strategies and tactics. The Canadian Science Advisory Secretariat (CSAS) oversees the provision of all scientific advice required by operational client sectors within the Department (Fisheries and Aquaculture Management, Oceans and Habitat Management, and Policy). In the Pacific

Region, science advisory processes are managed by the Centre for Science Advice Pacific (CSAP)².

Scientific assessments and advice respecting the assessment and management of this fishery is peer reviewed annually in Regional Peer Review meetings. Government and non-government individuals with knowledge and technical expertise pertaining to each peer review meeting are invited to contribute to the peer review and development of advice. The schedule of CSAS meetings is available online at: <http://www.isdm-gdsi.gc.ca/csas-sccs/applications/events-evenements/index-eng.asp>. General information about the CSAS Policies, Procedures, Schedule and Publications can be found at: <http://www.dfo-mpo.gc.ca/csas-sccs/index-eng.htm>.

During the 2015/16 fishing season, the Science Branch Groundfish Section scheduled stock assessments for peer review through the CSAS process for the following species: Yelloweye (Outside), Arrowtooth Flounder, and Shortspine Thornyheads and the Sablefish operating model. Reports from these peer review meetings are being finalised and will be available at the website link above. Petrale Sole, the development of a tiered approach for assessing data deficient species, and simulation testing of fishery management procedures for Sablefish are scheduled for 2016/17.

Science advice, proceedings and stock assessments/scientific evaluations resulting from of CSAS meetings are available online at: <http://www.meds-sdmm.dfo-mpo.gc.ca/csas-sccs/applications/Publications/index-eng.asp>. The following provides a brief description of the various documents published by CSAS.

- Science Advisory Reports

Science Advisory Reports (SAR) summarise the technical considerations and document the conclusions and advice developed during a CSAS science peer review process. SAR include traditional Stock Status Reports, Ecosystem Status Reports, and Habitat Status Reports, as well as advice pertaining to management strategies, frameworks and guidelines on the assessment or evaluation on specific issues, impacts of human activities on ecosystem components. Recovery assessments for species or populations are also included in this series.

- Research Documents

Research Documents are peer-reviewed, technical publications that document the scientific evidence and evaluation taken into consideration in the development of science conclusions and advice presented in Science Advisory Reports.

- Proceedings

Proceedings record the activities at CSAS peer review meetings or workshops. The Proceedings generally record decisions, recommendations, and major points of discussion

² Pacific Halibut and Pacific Hake are two groundfish species whose assessments are delivered outside the CSAP process. These species are each managed under the auspices of treaties between Canada and the United States, with associated annual stock assessment processes.

at these meetings and workshops. Proceedings capture the diversity of opinion present at the meeting or workshop.

- **Science Responses**

The Science Responses document information and advice provided by DFO Science for issues handled via the Science Special Response Processes (SSRPs). SSRP is a streamlined peer review process that deals with urgent and unforeseen requests for advice, for situations where the timelines for providing the advice do not allow for a full peer review process, in cases where there is a clear and valid framework to provide advice or for cases where DFO is not the final decision-making body.

6.4. Precautionary Approach (PA)

The Department has recently begun implementation of the Sustainable Fisheries Framework (SFF), which is a toolbox of existing and new policies for DFO and other interests to sustainably manage Canadian fisheries in order to conserve fish stocks and support prosperous fisheries (<http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm>).

Fisheries worldwide are under increasing pressure, creating challenges for policy makers, resource managers, and interested parties to make informed decisions regarding the conservation, recovery, and wise management of these resources. DFO held consultations throughout Canada in 2007 and 2008 to develop strategies to ease ecosystem pressures and enhance the capacity of the resource to sustain growing industry needs. New conservation policies have been developed to implement the ecosystem and precautionary approaches to fisheries management. These new policies, incorporated into development of new Integrated Fisheries Management Plan (IFMP) templates, will join existing policies in a framework to promote sustainable fisheries.

The new fishery decision-making framework incorporating the precautionary approach policy (available at the weblink listed above) applies to key harvested fish stocks managed by DFO, including commercial, recreational, or food, social, and ceremonial fisheries.

The framework requires that a harvest strategy be incorporated into respective fisheries management plans to keep the removal rate moderate when the stock status is healthy, to promote rebuilding when stock status is low, and to ensure a low risk of serious or irreversible harm to the stock. It also requires a rebuilding plan when a stock reaches low levels.

In general, the precautionary approach in fisheries management is about being cautious when scientific knowledge is uncertain, and not using the absence of adequate scientific information as a reason to postpone or fail to take action to avoid serious harm to fish stocks or their ecosystem. This approach is widely accepted as an essential part of a sustainable fisheries management. Applying the precautionary approach to fisheries management decisions entails establishing a harvest strategy that:

- identifies three stock status zones – healthy, cautious, and critical – according to upper stock reference points and limit reference points;
- sets the removal rate at which fish may be harvested within each stock status zone; and
- adjusts the removal rate according to fish stock status variations (i.e., spawning stock biomass or another index/metric relevant to population productivity), based on pre-agreed decision rules.

All new groundfish stock assessments will be written in a manner consistent with the Department's Precautionary Approach.

6.5. Research

Listed below are the Department groups and processes involved in groundfish stock assessment and research.

6.5.1. Science Branch

A goal of the Fisheries and Oceans Canada Science Branch is to provide high quality knowledge, products and scientific advice on Canadian aquatic ecosystems and living resources, with a vision of safe, healthy, productive waters and aquatic ecosystems. Groundfish research and stock assessments are conducted in the Groundfish Section of the Science Branch.

6.5.2. Inshore Rockfish Research

The inside longline research survey is conducted annually. This survey is designed to cover the inside waters over two years, rotating between northern and southern portions. These surveys are conducted over hard bottom between 41 and 100 m in depth to determine the catch by species and to collect biological samples. These surveys were initiated in 2003 in Areas 12 and 13, and have alternated with more southern management areas since then.

Visual monitoring of Rockfish Conservation Areas (RCAs) has been conducted since 2007 using DFO's underwater video camera mounted on a Phantom remotely operated vehicle (ROV). Research and development of survey methodology using this new tool has proceeded in the Strait of Georgia RCAs and in 2010 moved through more northern RCAs within Areas 12 and 13 and in 2011 along the West Coast of Vancouver Island. There are no plans for the continuation of the ROV monitoring program.

Joint research work with University of British Columbia graduate students continues with two projects on inshore rockfish. The assessment of RCAs using visual methods and research into bite times for various fish species on longline gear. These projects investigate RCA monitoring methodology and new longline relative abundance indices.

6.5.3. Outside Waters Rockfish Research

6.5.3.1. Synoptic Survey

In 2006, a new research survey was planned with the research committee of the Pacific Halibut Management Association. This survey is part of an effort to index groundfish populations in all areas of the coast. The survey grid developed for hard bottom areas are matched alongside those developed for the coastwide trawl surveys. Data from both the longline and trawl surveys will provide coastwide abundance indices and ancillary biological data for the more commonly caught species and provide general distributional data for all the others.

Employing a depth stratified random design, hard bottom areas coastwide will be surveyed with longline gear over a two year period, alternating between northern and southern portions of Canada's Pacific coast. A target of 200 fishing sets are selected in each year and three commercial fishing vessels are chartered to fish in one of three areas within the northern or southern portion of the coast each year. The southern portion of the coast is scheduled to be surveyed in 2016.

6.5.3.2 Standardized Stock Assessment Survey

In 2003, cooperative work with industry and the International Pacific Halibut Commission (IPHC) was initiated to collect data on catch other than halibut on the annual SSA in B.C. waters. A third technician has been employed in B.C. waters to collect hook by hook catch information as well as biologically sample rockfish species caught on the survey. Data from this survey provides an annual coastwide relative abundance index for rockfishes as well as distributional information for all other catch.

6.5.4. Groundfish Trawl Multi-Species Surveys

Since 2003, a series of Groundfish Trawl Multi-species surveys have been conducted jointly between the Department and the groundfish industry through the Canadian Groundfish Research and Conservation Society. The purpose of the surveys is to gather fishery independent data to provide usable relative abundance indices for as many benthic and near benthic fish species as is reasonable and obtain supporting biological samples of size and age composition. This survey program is comprised of 4 area specific surveys. Current plans are to continue the surveys on a biennial rotation for each area conducting two surveys annually, one aboard a chartered commercial fishing vessel funded by the industry, and the other aboard a government research trawler.

6.5.5 Sablefish Research and Assessment Survey Program

The Sablefish Research and Assessment Survey Program includes four primary components:

- A Randomized Tagging survey captures sablefish for tagging and release following an area and depth stratified randomized survey design. The catch rate data are used to derive an index of stock abundance and are a primary input to the sablefish management procedure. Tag-recoveries can be used for deriving

estimates of gear selectivity, studying movement, and potentially for deriving a tagging-based index of abundance.

- An Inlets survey captures sablefish for tagging and release in standardized sets at four mainland inlet localities. As with the Randomized Tagging survey, tagged sablefish captured during the survey are measured, re-tagged and released.
- A Benthic Contact project is being conducted by researchers from the Canadian Sablefish Association, Simon Fraser University, and DFO Science. The project is intended to provide quantitative estimates of the area contacted by longline trap gear using sensors that capture gear movement during a set and video cameras in high-pressure housings that capture imagery of the benthos. Prototypes of both types of equipment were tested in 2012, in anticipation of broader deployment in 2013.
- A Traditional Standardized survey was conducted from 1990 – 2010 but was put into hiatus and is unlikely to be resumed. The activity required standardized sets at nine offshore fishing localities and biological sampling. One set was made in each of five depth intervals in each locality. Catch rates from these sets were used as a stock index until it was determined that the area and depth randomized survey had superior stock indexing properties. Data from this activity are used in the management strategy evaluation for sablefish to help estimate historical biomass.

7. ECONOMIC, SOCIAL AND CULTURAL IMPORTANCE

The purpose of this section is to provide a socio-economic overview of groundfish fisheries in British Columbia, using available information. This summary addresses groundfish in the context of the Aboriginal food, social, and ceremonial fishery, the recreational fishery, and the commercial fishery including harvesting, processing, and export activity. The focus of this section is on the economic activity of the fisheries rather than measures of economic value (i.e. consumer and producer surpluses). Where available, information on the social and cultural context of the fisheries has been included; these sections may be expanded in future years, as additional information is made available. The information from 2003 to 2013 is included, although the entire period is not covered in all instances due to data limitations. DFO recognizes the unique values of each of the fisheries described here. The overview provided by this profile is intended to help build a common understanding of the socio-economic dimensions of the fisheries rather than compare the fisheries.

7.1. Aboriginal Food, Social, and Ceremonial Fishery

7.1.1 Participation

Generally, there are three categories of Aboriginal participation in fisheries – food, social, and ceremonial (FSC), commercial, and treaty.

7.1.1.1 Participation in the Food, Social, and Ceremonial Fishery

Section 35(1) of the Constitution Act, recognizes and affirms the existing Aboriginal and treaty rights of the Aboriginal peoples in Canada, however it does not specify the nature or content of the rights that are protected. In 1990, the Supreme Court of Canada issued a landmark ruling in the Sparrow decision. This decision found that the Musqueam First Nation has an Aboriginal right to fish for FSC purposes. The Supreme Court found that where an Aboriginal group has a right to fish for FSC purposes, it takes priority, after conservation, over other uses of the resource. The Supreme Court also indicated the importance of consulting with Aboriginal groups when their fishing rights might be affected.

The Aboriginal Fisheries Strategy (AFS) was implemented in 1992 to address several objectives related to First Nations and their access to the resource. These included:

- To provide a framework for the management of fishing by Aboriginal groups for food, social and ceremonial purposes.
- To provide Aboriginal groups with an opportunity to participate in the management of fisheries, thereby improving conservation, management and enhancement of the resource.
- To contribute to the economic self-sufficiency of Aboriginal communities.
- To provide a foundation for the development of self-government agreements and treaties.
- To improve the fisheries management skills and capacity of Aboriginal groups.

AFS fisheries agreements may identify the amounts that may be fished for FSC purposes, terms and conditions that will be included in the communal fishing licence, and fisheries management arrangements. In Pacific Region, 14 First Nations have AFS agreements that specify groundfish. The Minister of Fisheries and Oceans may also issue a communal fishing licence to a group to fish for FSC purposes; currently 53 coastal First Nations have such licences that include groundfish species.

7.1.1.2 Participation in the Commercial Fishery

Aboriginal participation in the commercial fishery, either communally or individually, is described below in section 7.3.

7.1.1.3 Participation in Modern Aboriginal Treaties

Fisheries chapters in modern First Nation treaties articulate a treaty fishing right for FSC purposes that is protected under Section 35 of the Constitution Act, 1982 (commercial access may be provided either through the general commercial fishery or a Harvest Agreement, which is negotiated at the same time as the treaty and is referenced in the treaty, but is not protected under the Constitution Act).

Four modern treaties (Nisga'a Final Agreement, Tsawwassen First Nation Final Agreement (TFA), Maa-nulth First Nations Final Agreement (MNA), and Tla'amin Nation Final Agreement) have been ratified in British Columbia.³

The Maa-nulth treaty includes five Nuu-cha-nulth First Nations (Ka:'yu:k't'h/Che:k'tles7eth, Huu-ay-aht, Toquaht, Uchucklesaht, Ucluelet) and came into effect in April 2011; it provides for commercial groundfish in a Harvest Agreement.

7.1.2 Social and Cultural Significance

There are approximately 204 First Nations in British Columbia, of which 187 qualify for AFS funding. Fisheries and the harvest and management of aquatic resources have particular importance to many Aboriginal communities. Many Aboriginal communities are located adjacent to key fishing sites, oceans and aquatic resources, and consider the management of these resources to be matters important to these communities. There are Aboriginal groups who are seeking greater access to economic opportunities from aquatic resources as a potential driver for economic development in their communities; more stability in FSC fisheries; a greater role in the aquatic resource and oceans management decisions that affect them; and a greater role in stewardship, including stock assessment, oceans and habitat management, conservation and protection, and recovery strategy development and implementation.

7.2. Recreational Fishery

Recreational, or sport fishing, is a leisure activity that may also provide food for personal use. These activities provide benefits to the individual participants as well as contribute directly and indirectly to the economy through fishery related expenditures. This section focuses primarily on economic activity rather than the economic benefits to individual anglers or businesses. Catch levels in the recreational groundfish fishery are managed using area specific openings and retention levels. There are no restrictions on the number of tidal water recreational licences.

7.2.1 Participation

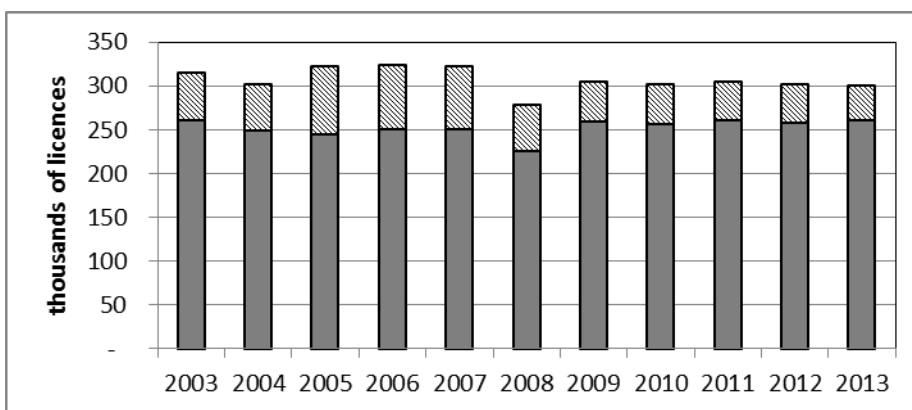
Tidal water recreational licences permit access to all marine species, including many groundfish, under the conditions described in the BC Sport Fishing Guide. The number of tidal water licences sold for access in BC decreased from around 337,000 in 2003, to settle around 300,000 since 2008 (Figure 1). The majority of the decline has been due to a decrease in the sale of licences to non-Canadian residents.

The National Recreational Fishing Survey is conducted every five years.⁴ In 2010, approximately 42% of responding anglers identified Halibut as one of their top three

³ Details of concluded final agreements can be found at <https://www.aadnc-aandc.gc.ca/eng/1402584983606/1402585060047>.

preferred species, while 14% identified Lingcod and 7% identified rockfish in their top three (DFO internal data). This suggests that over 120,000 anglers may target groundfish species each year. Fewer BC residents place Halibut in their top three (38%), than do anglers from outside BC (52%). Resident and non-resident anglers fished an estimated 2 million days in BC tidal waters. Approximately 16% to the days fished included time fishing for halibut, while 12% and 11% included time fishing for lingcod and rockfish, respectively.

Figure 1: BC tidal water recreational fishing licences sold to Canadians (solid) and non-residents (pattern) 2003-13 (thousands of licences)



Source: DFO. Recreational Licensing Statistics. 2012-13 preliminary internal data. Early data available at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/licence-permis/stat-eng.htm> (accessed October 31, 2012).

The number of businesses in BC that provide recreational fishing services directly to anglers (e.g. guides and charters) is unknown.

7.2.2 Economic Contribution

Between 2005 and 2011, the contribution of the saltwater recreational fishing sector (all species) to the real gross domestic product (GDP)⁵ and employment in BC grew by 9% and 5% respectively (Figure 2). Based on the methodology used, of the GDP and employment attributed to the fisheries and aquaculture sectors in BC, saltwater recreational fishing accounted for 27% of GDP and 31% of employment.⁶ The portion of

⁴ DFO. National Recreational Fishing Survey in Canada. 2010 information online at: <http://www.dfo-mpo.gc.ca/stats/rec/can/2010/index-eng.htm> and 2005 information online at: <http://www.dfo-mpo.gc.ca/stats/rec/can/2005/index-eng.htm> (accessed November 1, 2012).

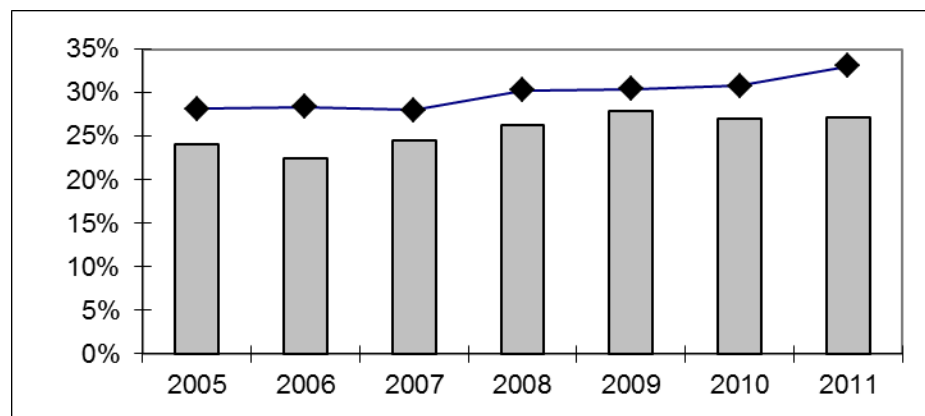
⁵ Gross Domestic Product includes wages to labour, owner profits and earnings, return on capital investments, changes in inventories, and depreciation on capital.

⁶ BC Stats. 2013. British Columbia's Fisheries and Aquaculture Sector: 2012 edition. Available at: <http://www.bcstats.gov.bc.ca/StatisticsBySubject/BusinessIndustry/FisheriesAquacultureHuntingTrapping.aspx> (Accessed September 2, 2014). The report includes details on data sources and limitations, which the reader should be aware of before using the data from the report. Of special note is that methods and data used to measure variables such as GDP, employment and income vary significantly between the sectors.

this contribution that is attributable to groundfish was not determined. However, the data from the 2010 National Survey of Recreational Fishing indicates that halibut, lingcod and rockfish accounted for approximately 23% of total direct fishing expenditures and about 30% of expenditures on fishing packages in BC.

Determining the contribution of the recreational fishing sector to the economy is complicated, as some, but not all, of the GDP, employment and revenue attributable to the industry is also part of the province’s tourism sector. Tourists are those people who travel 80 kilometres or more from their usual place of residence in order to participate in the activity. While many anglers live near to the coast of BC and can participate without travelling far from home, others must travel to participate in the tidal water recreational fishery and are classified as tourists. Consequently, there is significant overlap in the economic values for the recreational fishing sector and the tourism sector. Approximately 30% of the overall recreational fishing sector’s contribution to GDP is the result of activities not directly related to fishing, but rather includes non-angling activities undertaken by tourist anglers (e.g. visiting a museum).

Figure 2: Share of BC fisheries and aquaculture sector GDP (bars) and employment (line) from the saltwater recreational fishing sector, 2005-2011



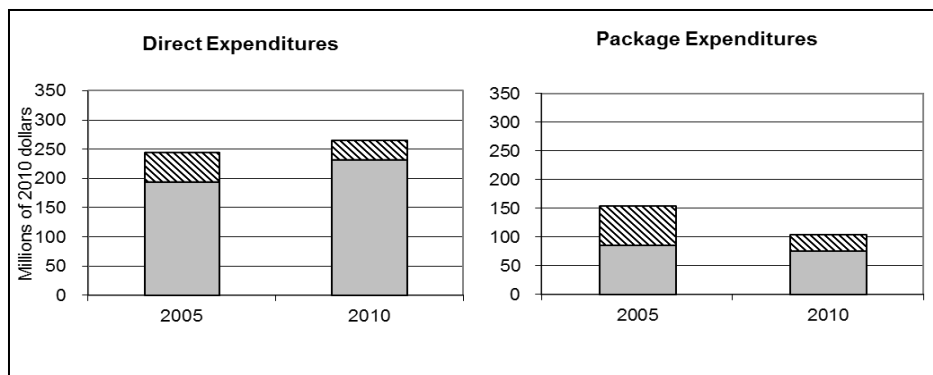
Source: BC Stats. 2012. British Columbia’s Fisheries and Aquaculture Sector.

The calculation of GDP used, among other data sources, expenditure estimates from the National Survey of Recreational Fishing. Expenditures by tidal water anglers in BC in constant 2010 dollars, increased from 2005 to 2010 (Figure 3). Direct expenditures increased by 8% between 2005 to 2010 period, while expenditures on packages decreased by 33% during this period. Expenditures on fishing packages by BC resident anglers has increased considerably over the past decade; in real terms, it increased by over 13% between 2005 and 2010 and BC residents are now the primary consumers of fishing trip packages in the province.

Canadian and international tourists account for approximately 25% of tidal water recreational licences purchased in BC. In 2010, 47,269 of the anglers surveyed were not

from BC. Of the international visitors, 47% reported they would not have come to BC had there not been tidal water fishing opportunities, while 32% of Canadian visitors would not have come.

Figure 3: Direct and package expenditures on tidal water recreational fishing by Canadians (solid) and non-residents (pattern), 2005 and 2010 (million 2010 dollars)



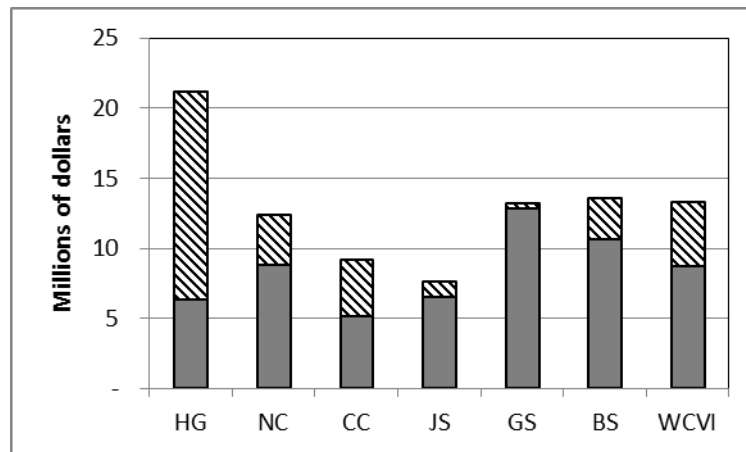
Source: DFO. National Recreational Fishing Survey in Canada.

7.2.3 Social and Cultural Significance

There is a lack of data on the location of recreational fishing sector dependent employment, and thus it is not possible to comment on the social significance of the fishery. However, it is recognized that recreational fishing activities - in particular, providers of fishing packages - often occur in more remote locations, providing important direct and indirect employment opportunities in these communities.

Regional estimates of angler expenditures attributable to groundfish activity illustrate differences between regions (Figure 4). In 2010, expenditures attributed to groundfish species (halibut, lingcod and rockfish) were highest in Haida Gwaii (\$21 million), where most expenditures were on packages, and lowest in the Johnston Strait area (almost \$8 million), where most expenditures were directly on fishing activity. The share of angler expenditures as a result of effort on groundfish varied between 13% (Georgia Strait) and 38% (Haida Gwaii) of the region's total direct expenditures, and 5% (Georgia Strait) and 38% (West Coast Vancouver Island) of the region's total package expenditures.

Figure 4: Angler 2010 direct expenditures (solid) and package expenditures (pattern) for groundfish (Halibut, Lingcod and rockfish) by region (millions of dollars).



Note: HG = Haida Gwaii; NC = North Coast; CC = Central Coast; JS = Johnston Strait; GS = Georgia Strait; BS = Barkley Sound; WCVI = West Coast Vancouver Island.

Source: DFO internal analysis of National Survey of Recreational Fishing (2010).

Additional information on the history and vision for recreational fisheries can be found in the document "Vision for Recreational Fisheries in BC" (<http://www.pac.dfo-mpo.gc.ca/consultation/smon/sfab-ccps/docs/rec-vision-eng.pdf>)

7.3. Commercial Fishery

The economic activity generated from commercial groundfish fishing sector includes harvesting, processing (including export activities) and the retail and distribution sectors. These activities provide benefits to the individual businesses owners as well as contribute directly and indirectly to the economy through expenditures on labour, supplies and services. This section is not able to address the activities associated with the retail and distribution sectors, and thus, may underestimate the economic activity associated with commercial harvest.

7.3.1 Participation

The number of active vessels, and thus presumably crew, involved in the harvest of groundfish declined between 2007 and 2013, from 304 vessels to 265.

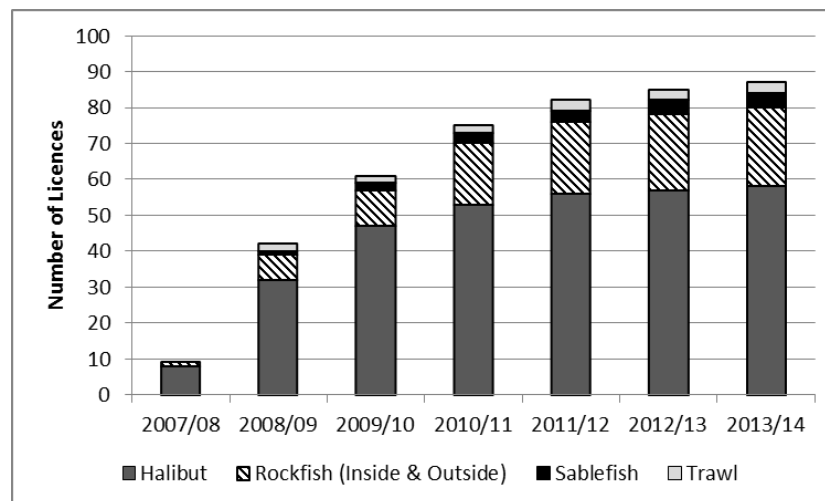
While groundfish vessels operate with between one and six individuals,⁷ it is not possible to estimate the number of unique individuals involved in the harvest of groundfish (e.g. owner-operators and hired captains and crew).

⁷ Nelson, S. 2011. [Pacific Commercial Fishing Fleet: Financial Profiles for 2009. Prepared for Fisheries and Oceans Canada, Pacific Region. June. Pacific Commercial Fishing Fleets Financial Profiles Series, 2011-4. 160pp. Available at: http://www.dfo-mpo.gc.ca/Library/343762.pdf](http://www.dfo-mpo.gc.ca/Library/343762.pdf)

In 2011 approximately 90 unique facilities of the 248 seafood processing facilities in BC processed some groundfish (self or custom).⁸ Of the approximately 3,742 year round equivalent jobs allocated to the processing of wild caught fish and shellfish, about 28% (1,035) attributed to processing halibut and other groundfish.

Aboriginal participation in the groundfish fishery may occur through communal licences, or as individual ownership of licences and vessels. Information on individual ownership is not available. Communal licences (F) identify communal Aboriginal participation within the commercial groundfish fishery and allow Aboriginal communities to designate vessels and individual fishers to carry out the fishing. The ATP and PICFI programs have been used by DFO to acquire commercial groundfish licence eligibilities (K, L, ZN, T) (Figure 5). The ATP and PICFI programs have also acquired and distributed slightly more than 16% of the total halibut quota, 15% of the sablefish quota as well as small amounts of quota for most trawl species. In 2014, PICFI allocated groundfish licences and quota in agreements with 19 Commercial Fishing Enterprises.

Figure 5: Cumulative Acquisition of Groundfish Licences by PICFI and ATP, 2007-2014



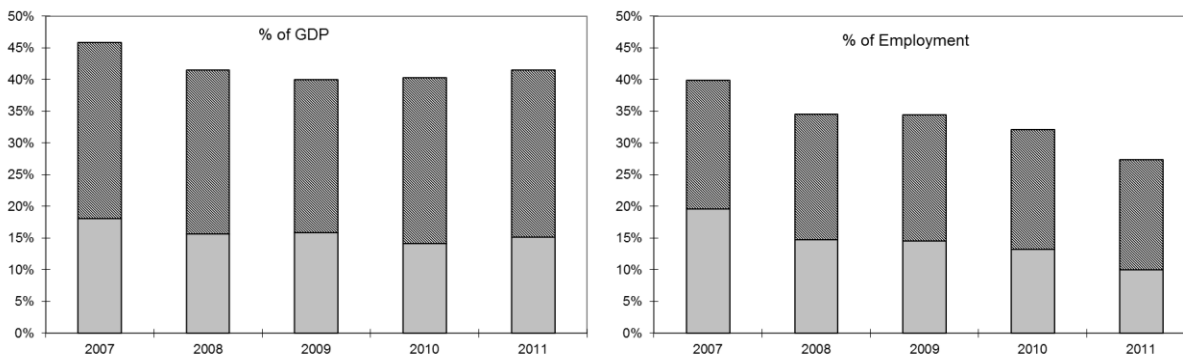
7.3.2 Economic Contribution

In 2011, the commercial capture fishery (excluding the retail and distribution sectors) accounted for 41% of the GDP (15% from fish harvesting and 26% from seafood processing) attributed to fisheries and aquaculture in BC (Figure 6). The commercial fishery also accounted for 27% of the employment (10% from fish harvesting and 17% from seafood processing) attributed to fisheries and aquaculture in BC based on the methodology used. The groundfish fishery was the largest component of the fish harvesting sector and was responsible for approximately 38% of the GDP for the fishing

⁸ BC Agriculture. 2015. 2011 Processor Employment Survey. Available at: <http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/statistics/industry-and-sector-profiles>. Plus additional analysis for DFO.

harvesting sector. There is no information on the share of processing GDP attributable to groundfish; however, over the past 5 years groundfish accounted for an average of about 38% of the wholesale value for the wild fish processing.⁹

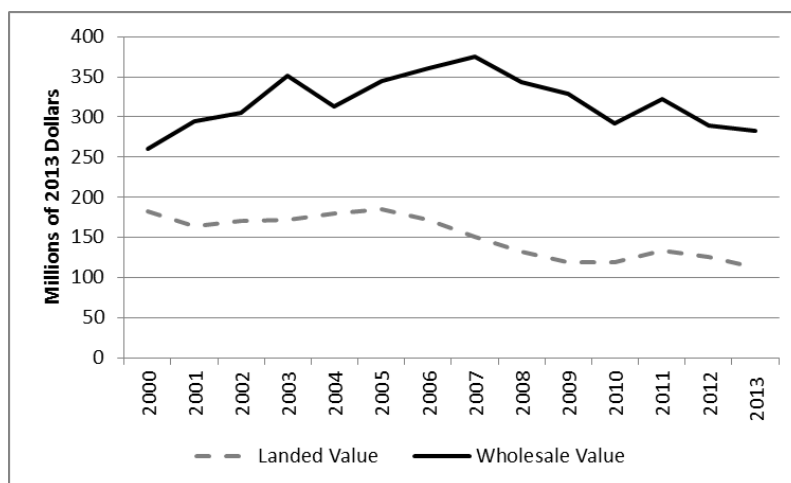
Figure 6: Share of BC fisheries and aquaculture sector GDP and employment accounted for by capture fishing (solid bar) and fish processing (pattern bar), 2007-2011 (% of fisheries and aquaculture sector total)



Source: BC Stats. 2012. British Columbia's Fisheries and Aquaculture Sector.

The real landed value of the groundfish fishery declined from 2000 (Figure 7). While real landed value has increased over the past few years, it has not reached past levels. This decline is primarily due to a decrease in the quantity harvested as inflation adjusted average prices increased between 2006 and 2012 (halibut, sablefish) or been stable. In 2013 there were small price declines for most groundfish species, but most notably for sablefish. In contrast to harvest values, the real wholesale value of the fishery saw increases until 2007, with an overall decline in value since then.

Figure 7: Groundfish landed and wholesale inflation adjusted values, 2000-2013 (Millions of 2013 dollars)



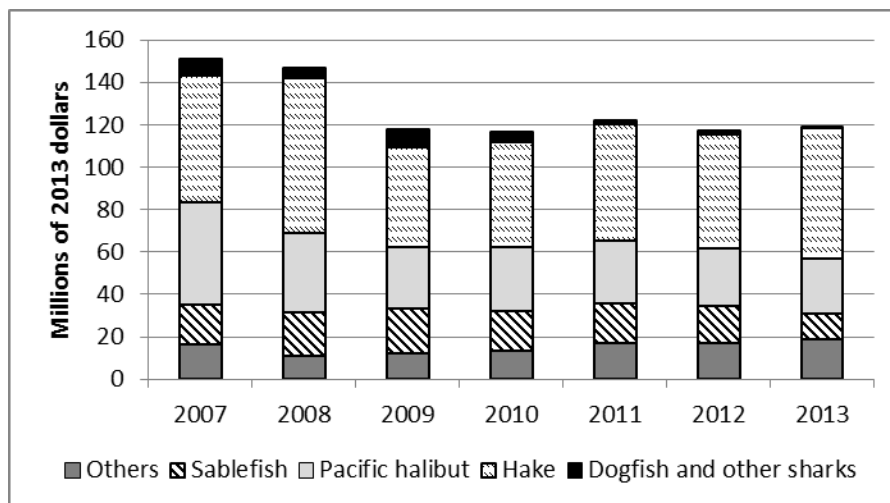
⁹ British Columbia Seafood Industry Year in Review. Various years. BC Ministry of Environment. <http://www.env.gov.bc.ca/omfd/index.html>

Source: British Columbia Seafood Year in Review. Various years.

The export data does not allow for identification of all groundfish species (e.g. rockfish); however, for most identifiable species there has been a decline in export values (Figure 8). This appears to be primarily due to reduced volumes as inflation-adjusted prices were steady or increased for all species, except for cod, soles and dogfish which had price declines. BC also imports substantial quantities of groundfish. Between 2007 and 2013, the average value of imports to BC for Halibut (all species), Cod, Pollock and Sablefish, were \$46.9M, \$12.7M, \$5.2M and \$1.7M respectively (in 2013 dollars).

In August 2014, the Russian Federation imposed a one year import ban on a range of food products including fish; the ban applied to products from Canada, the United States, Australia, the European Union and Norway. Between 2007 and 2013, seafood exports from BC to Russia increased from \$14.3 million (2013\$) to \$31.5 million, with hake accounting for an average of 81% of the total value. During this time, the destination for hake exports shifted as exports to China declined while those to the Ukraine and Russia increased. By 2013, the Ukraine accounted for 36% of the value of hake exports, Russia for 33% and China 18%. The implications of the ban are not yet clear; however, important competitors in the hake market (e.g. US) have also been affected, which may make it more difficult to locate alternative markets.

Figure 8: Value of key groundfish exports, 2007 to 2013 (in millions of 2013 dollars)



Note: Hake is sum of cusk+hake HS codes, plus hake-only HS codes. Other groundfish species includes cod other than Atlantic, flounders, lingcod, ocean perch, pollock including cusk+pollock, rays, skates, soles and other flatfish.

Source: Statistics Canada. EXIM. Accessed September 4, 2014.

Much of the commercial groundfish fishery in BC has been managed using limited access and individual vessel-based quota, in some cases for decades. Integration of the groundfish fleets was made permanent in 2009 after being initiated in 2006. Integration allows for a combination of temporary and permanent transfers of quota allocations between licences. In response, fishing vessel owners, including individuals and

processors, have developed a range of business strategies that generally include licences in multiple fisheries.

Some of these changes can be seen when looking at vessels by main fishery between 2005 and 2012; main fishery is the fishery that accounts for the largest share of the vessel revenues (Table 1). For groundfish, 2005 was pre-integration and landings and real landed value were at or near peak levels. Of the 423 vessels that participated in the groundfish fisheries, 67% (282) earned the majority of their revenue from one of the fisheries. The remainder of the vessels (141) obtained the majority of their fish harvest revenues from fisheries other than groundfish. Since 2005, harvest limits have been reduced for numerous species in response to updated information about stock status.

By 2012, the number of vessels participating in the groundfish fisheries declined to 302 and 224 of those vessels earned the majority of their revenue from groundfish. The average inflation adjusted revenue per vessel was lower, despite price increases for halibut, lingcod, and sablefish well above the rate of inflation. Vessels that obtained the majority of their revenue from groundfish trawl focused almost entirely on the trawl fishery with less than 1% of average revenues from other fisheries. Vessels that earned the majority of their revenue from the sablefish and rockfish fisheries had more diverse revenue streams. Over this period fuel and lease costs, which are significant for the groundfish fisheries, increased at rates well above the overall inflation rate. Consequently, the interplay of consolidation and changes in landings, real prices and costs contributed to varied outcomes in net income for vessels and fisheries.

Table 1: Average Revenues per Vessel by Main Fishery^a, 2005 and 2012.

	Greatest share of annual revenues from:							
	Trawl		Halibut		Sablefish		Rockfish	
	2005	2012	2005	2012	2005	2012	2005	2012
Vessels (#)	70	54	163	131	17	22	32	17
Avg Revenue, all fisheries '000s 2012\$ per vessel	1,358	959	361	347	1,770	1,173	19	76
% from Main Fishery	69%	100%	76%	76%	88%	79%	85%	73%
% from Other Fisheries	31%	0%	24%	24%	12%	21%	15%	27%

^aNote: Main fishery is the fishery from which a vessel receives the greatest share of revenue.
Source: DFO internal data.

To address concerns regarding the financial viability of the small boat groundfish fleet, a research project has been initiated by the Canadian Fisheries Research Network. The project, will among other things, evaluate the trade-offs between economic benefits and harvest alternatives.¹⁰ This research involves industry, government and academia.

¹⁰ Canadian Fisheries Research Network. 2012. Project 3.3a – Applying management strategy evaluation to identify economically viable harvesting options for the B.C. small boats groundfish fleet. <http://www.cfrn-rcrp.ca/tiki-index.php?page=Public-Project3.3a-EN>. Accessed November 30, 2012. An update is not available.

For Aboriginal communities and individuals, participation in the commercial groundfish fishery provides socio-economic benefits from revenues generated by leasing, profits from harvesting and employment-generated income.

7.3.3 Social and Cultural Significance

There is a lack of information on communities of residence for groundfish captains and crew. Consequently, it is not possible to comment of the social significance of the groundfish harvesting sector to BC communities. In the case of processing employment, past work has suggested a strong correlation between the off-loading location of groundfish and processing employments.¹¹ There are smaller centres for which commercial fishing and fish processing are integral elements of the local economy. In some locations, groundfish represents a significant component of processing employment.¹²

There is a long history of commercial groundfish fishing in British Columbia. This history has been documented by several authors, although the link between current culture and the historical significant is less documented.¹³ The industrial halibut fishery harvested halibut back to the 1880's, but the harvest was largely marketed in Seattle until the arrival of the railroad.¹⁴ From small shipments east in 1888, the fishery grew until it accounted for over 80% of Canadian halibut landings by the 1940s. Prince Rupert, labelled the "Halibut Capital of the World", originally shipped via steamships but switched to rail in 1913, with dozens of rail cars of iced halibut shipped each month.

The trawl fishery began with only a few nets in the early 1900s, with the otter trawl introduced in 1911. Initially most of the harvest was sold locally. The trawl fishery went through a number of periods of growth and decline, with growth during both World Wars. The WWII expansion was based largely on the development of the dogfish liver oil market. The groundfish fishery remains part of the BC coast¹⁵, with expanded methods, and provides seafood for domestic and international markets.

8. OTHER GROUND FISH MANAGEMENT ISSUES

8.1. Depleted Species Concerns

8.1.1. Species at Risk

¹¹ Fraser and Associates. 2008. Linkages Between the Primary Fish Production and Fish Processing Sectors in British Columbia: Final phase 2 report. Prepared for the Department of Fisheries and Oceans, Pacific Region. Victoria, British Columbia.

¹² BC STATS. (2010). Groundfish and Sardine Fisheries. Available online at: <http://www.env.gov.bc.ca/omfd/reports/>. Last accessed December 29, 2011.

¹³ For example: Forester, Joseph E. and Anne D. Forester. 1975. British Columbia's Commercial Fishing History. Hancock House Publishers Ltd., Saanichton, BC.

¹⁴ Forester, Joseph E. and Anne D. Forester. 1975. British Columbia's Commercial Fishing History. Hancock House Publishers Ltd., Saanichton, BC.

¹⁵ Robson, Peter A. and Michael Skog (editors). 1996. Working the Tides: A Portrait of Canada's West Coast Fishery. Harbour Publishing, Madeira Park, BC.

The *Species at Risk Act* (SARA) came into force in 2003. The purposes of the Act are “to prevent wildlife species from being extirpated or becoming extinct, and to provide for the recovery of a wildlife species that are extirpated, endangered or threatened as a result of human activity and to manage species of special concern to prevent them from becoming endangered or threatened”. More information on SARA can be found at www.sararegistry.gc.ca.

In addition to the existing prohibitions under the *Fisheries Act*, under SARA it is illegal to kill, harm, harass, capture, take, possess, collect, buy, sell or trade any listed endangered or threatened animal or any part or derivative of an individual. These prohibitions apply unless a person is authorized, by a permit, licence or other similar document issued in accordance with SARA, to engage in an activity affecting the listed species or the residences of its individuals. Species listed as special concern are not included in these prohibitions.

Endangered, threatened, and special concern species in Pacific region currently listed under SARA can be found at <http://www.dfo-mpo.gc.ca/species-especies/listing-eng.htm>. In the Pacific Region, the following SARA-listed species may be encountered:

1. Basking Shark - Endangered
2. Blue Whale – Endangered
3. Bluntnose Sixgill Shark – Special Concern
4. Fin Whale – Threatened
5. Grey Whale – Special Concern
6. Harbour Porpoise – Special Concern
7. Humpback Whale – Threatened
8. Killer Whale northern resident population – Threatened
9. Killer Whale offshore population – Special Concern
10. Killer Whale southern resident population – Endangered
11. Killer Whale transient population – Threatened
12. Leatherback Turtle – Endangered
13. Longspine Thornyhead – Special Concern
14. North Pacific Right Whale – Endangered
15. Rougheye Rockfishes Types I & II – Special Concern
16. Sea Otter – Special Concern
17. Sei Whale – Endangered
18. Steller Sea Lion – Special Concern
19. Tope (Soupfin) Shark – Special Concern
20. Yelloweye Rockfish – Special Concern

Some marine or anadromous species of fish designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) that are currently under consideration for listing under SARA include:

- Bocaccio Rockfish – Endangered
- Darkblotched Rockfish – Special Concern

- Quillback Rockfish – Threatened
- Yellowmouth Rockfish – Threatened
- North Pacific Spiny Dogfish – Special Concern
- Eulachon, Fraser River Population – Endangered
- Eulachon, Central Pacific Coast Population – Endangered
- Eulachon, Nass/Skeena Population – Special Concern
- Northern Fur Seal - Threatened

8.1.2. Shark Codes of Conduct

Out of the fourteen shark species in Canadian Pacific waters, three species are listed under SARA (see above). The Basking Shark (*Cetorhinus maximus*) is listed as Endangered, and the Bluntnose Sixgill Shark (*Hexanchus griseus*) and Tope Shark (*Galeorhinus galeus*) are listed as species of Special Concern. The primary threats to shark species have been identified as bycatch and entanglement. In order to address the conservation concerns with shark species, it is important that measures are taken to reduce the mortality of sharks resulting from these primary threats. As such, commercial fishing licences have been amended to include a Condition of Licence for Basking Sharks that specifies mitigation measures in accordance with SARA permit requirements.

Additionally, two 'Code of Conduct for Shark Encounters' documents have been developed to reduce the mortality of Basking Shark, as well as other Canadian Pacific shark species such as Bluntnose Sixgill and Tope Shark resulting from entanglement and bycatch in commercial, aquaculture, and recreational fisheries. These guidelines include boat handling procedures during visual encounters with Basking Sharks, as well as best practices for handling Canadian Pacific shark species during entanglement encounters. These documents have been posted online and can be found at the following URL links.

Code of Conduct for Sharks: http://www.pac.dfo-mpo.gc.ca/fm-gp/species-especies/shark-requin/conduct_shark-conduite_requin-eng.html.

Code of Conduct for Basking Sharks: http://www.pac.dfo-mpo.gc.ca/fm-gp/species-especies/shark-requin/conduct_basking-conduite_pelerin-eng.html.

Industry has taken additional steps that complement these Codes of Conduct. Since the 2012/2013 season, the Groundfish trawl industry, in support of Fisheries and Oceans Canada's increased conservation efforts for some Elasmobranchs - particularly those listed as SARA species – has supported a prohibition on the selling and retention of Pacific Basking Shark, Tope (Soupin) Shark or Bluntnose Sixgill Shark in the British Columbia groundfish trawl fishery.

Additionally, cognizant of the international efforts taken to protect shark species, the groundfish trawl industry has agreed to eliminate all directed fishing for shark species, other than North Pacific Spiny Dogfish, as of the 2012/2013 season.

Most current encounters of these and other shark species are not targeted, and the groundfish trawl industry has worked with the Department to develop practical measures

and protocols that may minimize encounters and mortality. These protocols can be found in section 20 of the Groundfish Trawl Harvest Plan, which is Appendix 8 to this document.

Groundfish hook and line fisheries are also not permitted to retain sharks, other than North Pacific Spiny dogfish. DFO has also introduced a prohibition on shark finning. See harvest plan appendices for further details.

8.1.3. Whale, Leatherback Sea Turtle and Basking Shark Sightings or Entanglements

The Department welcomes assistance in the reporting of any whale, leatherback turtle or basking shark sightings or entanglement. Sightings for Basking Shark, Leatherback Sea Turtles and many whale species are infrequent in Pacific Canadian waters, and the collection of sightings data is very useful to scientists in determining population size and distribution. Establishing this information can in turn help in the recovery planning under SARA.

To report sick, injured, distressed or dead marine mammals and sea turtles contact the DFO Marine Mammal Incident Reporting Hotline:

Toll free: 1-800-465-4336

To report whale or turtle sightings contact the BC Cetacean Sighting Network:

Toll free: 1-866-I-SAW-ONE (1-866-472-9663)

Fax: (604) 659-3599

Email: sightings@vanaqua.org

Internet : <http://www.bcreptiles.ca/reportsightings.htm>

To report basking shark sightings contact the Basking Shark Sightings Network:

Toll free: 1-877-50-SHARK

Email: BaskingShark@dfo-mpo.gc.ca

www.pac.dfo-mpo.gc.ca/SharkSightings

8.1.4. Whale Depredation

Depredation (the removal of fish from fishing gear) by killer whales and sperm whales has been reported in the groundfish longline fishery in British Columbia and Alaska.

Depredation is a learned behaviour that can spread throughout whale social groups and once established is impossible to eliminate. It is critical that harvesters do not encourage this learning by allowing whales to associate obtaining fish with fishing activity; encouraging this behaviour will quickly lead to significant losses for harvesters.

The most important approach to prevent this from spreading is by NOT feeding whales directly or indirectly and not hauling gear in the vicinity of killer whales and sperm

whales. Typically killer whales pass quickly through an area allowing fishing to resume. It is also recommended that you advise other fish harvesters in the area if you encounter depredation. Additional tips on avoiding depredation events can be found in the DFO Marine Mammal Bulletin #2.

If you experience depredation by whales, please report the incident by email MarineMammals@dfo-mpo.gc.ca or by calling (604) 666-9965. Reporting all incidents will assist DFO managers and fish harvesters in understanding this problem and help in developing strategies to avoid it.

8.1.5. Inshore Rockfish Conservation

In 2002, an inshore rockfish conservation strategy was established with initial measures introduced for recreational and commercial fisheries. The strategy addresses four areas under the fisheries management and stock assessment regime:

- a) Protect a part of inshore rockfish populations from harvest through the use of rockfish conservation areas.
- b) Collect information on total fishery mortalities through improved catch monitoring programs.
- c) Reduce harvests to levels that are less than the estimates of natural mortality (i.e. less than two percent).
- d) Improve the ability to assess the status of inshore rockfish populations and monitor changes in abundance.

There are 164 Rockfish Conservation Areas (RCAs) in place within BC waters. The most recent additions were implemented February 1, 2007 in the Strait of Georgia area. Fish harvesters are reminded prior to fishing to check with the local DFO office to verify RCA and other closures currently in effect. A description of all RCAs can be found at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/rca-acr/index-eng.htm>.

Consultations with First Nations will continue so that management of their fisheries will be consistent with conservation objectives and Departmental obligations with respect to priority access for food, social, and ceremonial purposes.

8.1.6. Bocaccio and Yelloweye Rockfish Conservation

Bocaccio

Based on updated science information and DFO's policy document "Guidance for the Development of Rebuilding Plans under the Precautionary Approach Framework", the Department set out a rebuilding plan in 2013 for stepped reductions of total Bocaccio harvest to a target level of 75 tonnes over 3 years (2013-14 to 2015-16) (see Appendix 9). The rebuilding plan accounts for First Nations' priority access for food, social, and ceremonial purposes. The Department has worked with fishing interests to develop measures that will reduce Bocaccio catch and enable stock rebuilding over the long term.

Following a 2014 review of the commercial groundfish fisheries' progress in reducing catch to meet the mortality caps, the measures for commercial groundfish fisheries were modified for the 2015/16 fishing season. Please refer to relevant conditions of licences, the Bocaccio Rebuilding Plan, and the harvest plans in the appendices of this IFMP for further information on the pilot measures being undertaken to reduce Bocaccio catch in commercial and recreational fisheries. The Department will review the efficacy of these pilot measures at the end of each fishing season and consider any additional measures necessary to achieve stock rebuilding.

Subsequent to the introduction of the rebuilding plan, in November 2013, the Committee On the Status Of Endangered Wildlife In Canada (COSEWIC) reassessed Bocaccio as "Endangered". As such, the federal government is required to consider listing Bocaccio under SARA. This work will include engagement with stakeholders and First Nations.

Yelloweye

Based on updated science information, the Department has set out a near term plan for stepped reductions of total Yelloweye outside population harvest from the estimated total catch mortality of 287 MT in 2014 to a mortality cap of 100 MT over 3 years (2016-17 to 2018-19) (see Appendix 9). This plan accounts for survey catches and aboriginal fishing opportunities.

Taking into consideration advice provided by fishing interests, the Department will introduce initial management measures for 2016 to make steps towards the mortality cap described above and has committed to future discussions in 2016 to define a more comprehensive plan for achieving the 100 MT mortality cap. Initial management measures include a 39% reduction in the commercial groundfish TAC and slight adjustments to the apportionment of the TAC between Groundfish Management Areas, a 33% reduction in recreational fishing opportunities, and a focus on improved reporting and avoidance of Yelloweye in the salmon troll fishery (retention of Yelloweye is already prohibited). The rebuilding plan will be updated in future years to reflect this more comprehensive plan.

8.2. Oceans and Habitat Considerations

In 1997, the Government of Canada enacted the *Oceans Act*. This legislation provides a foundation for an integrated and balanced national oceans policy framework supported by regional management and implementation strategies. In 2002, Canada's Oceans Strategy was released to provide the policy framework and strategic approach for modern oceans management in estuarine, coastal, and marine ecosystems. As set out in the *Oceans Act*, the strategy is based on the three principles of sustainable development, integrated management, and the precautionary approach. The *Oceans Act*, the *Canada Wildlife Act*, and the *National Marine Conservation Areas Act* have given rise to several initiatives on the BC coast, which are listed below. As goals, objectives, and management plans are finalized for these initiatives, the Department's management of fisheries will be adapted as appropriate, in consultation with interested parties through Integrated Fisheries Management processes.

PNCIMA:

An integrated management plan for the Pacific North Coast Integrated Management Area (PNCIMA) has been developed, in collaboration with the Province of British Columbia, First Nations and stakeholders to help coordinate various ocean management processes and to complement existing processes and tools including IFMPs. High level and strategic, the plan provides direction on integrated, ecosystem-based and adaptive management of marine activities and resources in the planning area as opposed to detailed operational direction for management. The plan outlines an ecosystem-based management (EBM) framework for PNCIMA that has been developed to be broadly applicable to decision-makers, regulators, community members and resource users alike, as federal, provincial and First Nations governments, along with stakeholders, move together towards a more holistic and integrated approach to ocean use in the planning area.

An electronic copy of the draft plan is available online at www.pncima.org.

Marine Protected Area Network Planning: The Oceans Act mandates DFO with leading and coordinating the development and implementation of a national network of marine protected areas. The National Framework for Canada's Network of Marine Protected Areas (National Framework) provides strategic direction for national network design that will be composed of a number of bioregional networks. Consistent with this direction, a Canada-British Columbia Marine Protected Area Network Strategy has been developed jointly by federal and provincial agencies. This Strategy reflects the need for governments to work together to achieve common marine protection and conservation goals. Bioregional marine protected area network planning may identify new areas of interest for protection by DFO, Parks Canada Agency, Environment Canada, the Province of BC, and any other agencies with a mandate for protecting marine spaces. Future network MPAs may overlap or include groundfish fishing areas depending on the type and nature of the MPA. More information on MPA Network Planning can be found at: <http://www.dfo-mpo.gc.ca/oceans/management-gestion/marineprotection-protectionmarine/index-eng.htm#network>

Marine Protected Areas (MPAs): DFO is also responsible for designating Marine Protected Areas (MPAs) under Canada's *Oceans Act*. Under this authority, DFO has designated two MPAs in the Pacific Region. The Endeavour Hydrothermal Vents, designated in 2003, lie in waters 2,250m deep 250 km southeast of Vancouver Island. The SGaan Kinghlas-Bowie Seamount Marine Protected Area (SK-B MPA), designated in 2008, is 180 km west of Haida Gwaii (formerly known as the Queen Charlotte Islands) rising from a depth of over 3,000 m to within 25 m of the sea surface. MPA regulations and management plans articulate any restrictions on activities taking place within the MPA, where applicable. At this time, all fisheries are restricted within the Endeavour and SK-B MPAs, except for a limited Sablefish trap fishery within the SK-B MPA (see SK-B MPA section below for further detail).

Work is ongoing to consider MPA designation for the Race Rocks area off Rocky Point south of Victoria (currently designated as a Provincial Ecological Reserve). Work also continues towards designating the Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs Area of Interest as a Marine Protected Area under the *Oceans Act*. The glass sponge reefs are located at depths of 140m to 240m in Hecate Strait and Queen Charlotte Sound. The proposed marine protected area regulations for this area were pre-published in 2015 for a 30 day public comment period. The comments received are currently being considered and a final regulatory package is being prepared for Governor-in Council consideration. Changes to existing IFMPs with respect to fishing activities may be required upon MPA designation. In addition, DFO will produce a management plan for any newly designated MPA, and will seek to align the plan with relevant IFMPs.

More information on MPAs can be found at:
<http://www.dfo-mpo.gc.ca/oceans/marineareas-zonesmarines/mpa-zpm/index-eng.htm>

National Marine Conservation Area Reserves (NMCARs):

Gwaii Haanas: Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve, and Haida Heritage Site is a 5000 km² land-and-sea protected area in the southern portion of Haida Gwaii (formerly the Queen Charlotte Islands), approximately 100 kilometres off the north coast of British Columbia. The Haida Nation declared the area a Haida Heritage Site in 1985. The terrestrial part of Gwaii Haanas was designated a National Park Reserve by the Government of Canada soon after, and the two parties have been managing the area cooperatively since 1993. In 2010, following an extensive public consultation process, the marine area of Gwaii Haanas was given the designation of National Marine Conservation Area Reserve.

Gwaii Haanas is managed by the Archipelago Management Board, a cooperative body made up of equal representation from the Government of Canada (represented by Fisheries and Oceans Canada and Parks Canada) and the Council of the Haida Nation. The Gwaii Haanas marine area is currently managed under the Interim Management Plan and Zoning Plan, which includes “balancing protection and ecologically sustainable use” in its guiding principles. The Zoning Plan identifies six areas, described in harvest plan appendices 3-8 of this IFMP, that are closed to commercial and recreational fishing.

Development of a long-term management plan for the Gwaii Haanas marine area is underway and will be completed by 2015. This process will take place in consultation with the commercial and recreational fishing sectors through Fisheries and Ocean’s established integrated fisheries planning and advisory processes. Annual fishing plans will be developed in consultation with stakeholders.

Users of the Gwaii Haanas marine area should be aware that adjacent land is managed under the authority of the *Canada National Parks Act* and its regulations and, as specified in the *Gwaii Haanas Agreement* (1993), there is "no extraction or harvesting by anyone of the resources of the lands and non-tidal waters of the Archipelago for or in support of commercial enterprise" (s3.3). There are specific requirements for visiting the terrestrial

portion of Gwaii Haanas, and advanced planning is necessary. Please contact the Gwaii Haanas administration office at 1-877-559-8818 for further information.

Commercial and recreational fishers and harvesters are reminded that extraction of any kind (e.g., fishing, kelp harvest) is not permitted in the areas described below:

(1) Burnaby Narrows

Those waters of Subareas 2-13 and 2-16 inside a line commencing at 52°23.049 minutes N and 131°23.438 minutes W east to 52°23.077 minutes N and 131°22.908 minutes W, following the southern shoreline of Kat island east to 52°23.107 minutes N and 131°22.274 minutes W, then east to 52°23.295 minutes N and 131°21.34 minutes W, following the western shoreline of Burnaby Island south to 52°20.951 minutes N and 131°20.509 minutes W, then west to 52°20.733 minutes N and 131°21.072 minutes W, and then north following the eastern shoreline of Moresby Island back to the point of commencement. [Burnaby Narrows]

(2) Louscoone Estuary

Those waters of Subareas 2-33 and 2-34 north of a line drawn from 52°11.836 minutes N and 131°15.658 minutes W east to 52°12.271 minutes N and 131°14.594 minutes W. [Louscoone Estuary]

(3) Flamingo Estuary

Those waters of Subarea 2-37 north of a line drawn from 52°14.456 minutes N and 131°22.234 minutes W southeast to 52°14.246 minutes N and 131°21.489 minutes W. [Flamingo Estuary]

(4) Gowgaia Estuary

Those waters of Subarea 2-41 east of a line drawn from 52°24.944 minutes N and 131°32.138 minutes W southeast to 52°24.238 minutes N and 131°32.024 minutes W. [Gowgaia Estuary]

(5) Cape Saint James

Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line commencing at 51°56.523 minutes N and 131°01.522 minutes W, southwest to 51°55.627 minutes N and 131°02.574 minutes W, then southeast to 51°52.5 minutes N and 130°57.919 minutes W, then south to 51°51.676 minutes N and 130°57.805 minutes W, then southeast to 51°50.349 minutes N and 130°56.442 minutes W, then northeast to 51°51.062 minutes N and 130°54.717 minutes W, then north to 51°53.888 minutes N and 130°55.608 minutes W, then northwest to 51°58.671 minutes N and 130°59.464 minutes W, and then west to 51°58.743 minutes N and 131°00.606 minutes W, and then following the southern shore of Kunghit Island west to the point of commencement. [Cape Saint James]

(6) SGang Gwaay

Those waters of Subareas 2-31 and 142-1 inside a 3km radius from the centre

point on Anthony Island located at 52°05.655 minutes N and 131°13.178 minutes W. [SGang Gwaay]

Southern Strait of Georgia: Parks Canada, in partnership with the Government of British Columbia, launched a feasibility assessment for an NMCA Reserve in the southern Strait of Georgia in 2004. Since then, consultations with First Nations, key stakeholders, communities and the public have occurred. Informed by those discussions, a proposed boundary for consultation was announced by the provincial and federal Ministers of Environment in 2011. Since 2011, the two governments have been consulting with First Nations, local governments and industry. A preliminary concept is currently being developed to help advance consultations on the feasibility assessment. If the results of the feasibility assessment indicate that establishment of an NMCAR is practical and feasible, an establishment agreement between the Governments of Canada and British Columbia will be negotiated and an interim management plan developed. If the NMCAR is determined to be feasible, further consultations related to establishment agreements and Aboriginal rights will also take place with First Nations. Commercial and recreational fishing sectors, communities, landowners, recreation and environmental organizations and other stakeholders will also have opportunities to provide input to the development of the interim management plan. More information on the proposed National Marine Conservation Area Reserve in the Southern Strait of Georgia is available on the internet at: www.pc.gc.ca/eng/progs/amnc-nmca/dgs-ssg/index.aspx

Marine National Wildlife Areas (NWAs): Under the Canada Wildlife Act, Environment Canada may establish marine National Wildlife Areas (NWAs). The Scott Islands marine National Wildlife Area, located off the northern tip of Vancouver Island, has been proposed for designation through amendment to the Wildlife Area Regulations. DFO would continue to regulate and administer fisheries within the proposed area. Environment Canada and DFO will develop a collaborative approach and agreement regarding management of fisheries in the area.

More information on the Scott Islands marine NWA can be found at: <http://www.ec.gc.ca/ap-pa/?lang=En&n=90605DDB-1>.

SGaan Kinghlas-Bowie Seamount Marine Protected Area: The SGaan Kinghlas-Bowie Seamount Marine Protected Area (SK-B MPA) is located 180 km offshore of Haida Gwaii on the Pacific coast. The SK-B seamount rises from a depth of 3,000 metres to within 25 meters of the surface making it one of the shallowest seamounts in the north Pacific. The MPA comprises the SK-B, Hodgkins and Davidson Seamounts of the Kodiak-Bowie seamount chain and has a total area of approximately 6,131 square kilometres.

The SK-B MPA has been established to conserve and protect the unique biodiversity and biological productivity of the area's marine ecosystem. The MPA's regulations establish the outer boundary of the MPA, which includes the SGaan Kinghlas-Bowie, Hodgkins and Davidson Seamounts — consisting of the seabed, the subsoil and the water column above the seabed — that is bounded by a series of rhumb lines drawn from a point

53°03'07.6" N, 135°50'25.9" W, to a point 53°16'20.9" N, 134°59'55.4" W, then to a point 53°39'49.2" N, 135°17'04.9" W, then to a point 53°39'18.0" N, 135°53'46.5" W, then to a point 53°52'16.7" N, 136°30'23.1" W, then to a point 53°49'19.6" N, 136°47'33.1" W, then to a point 53°40'02.5" N, 136°57'03.5" W, then to a point 53°13'59.2" N, 136°10'00.0" W, then back to the point of commencement (points are shown in Figure 8).

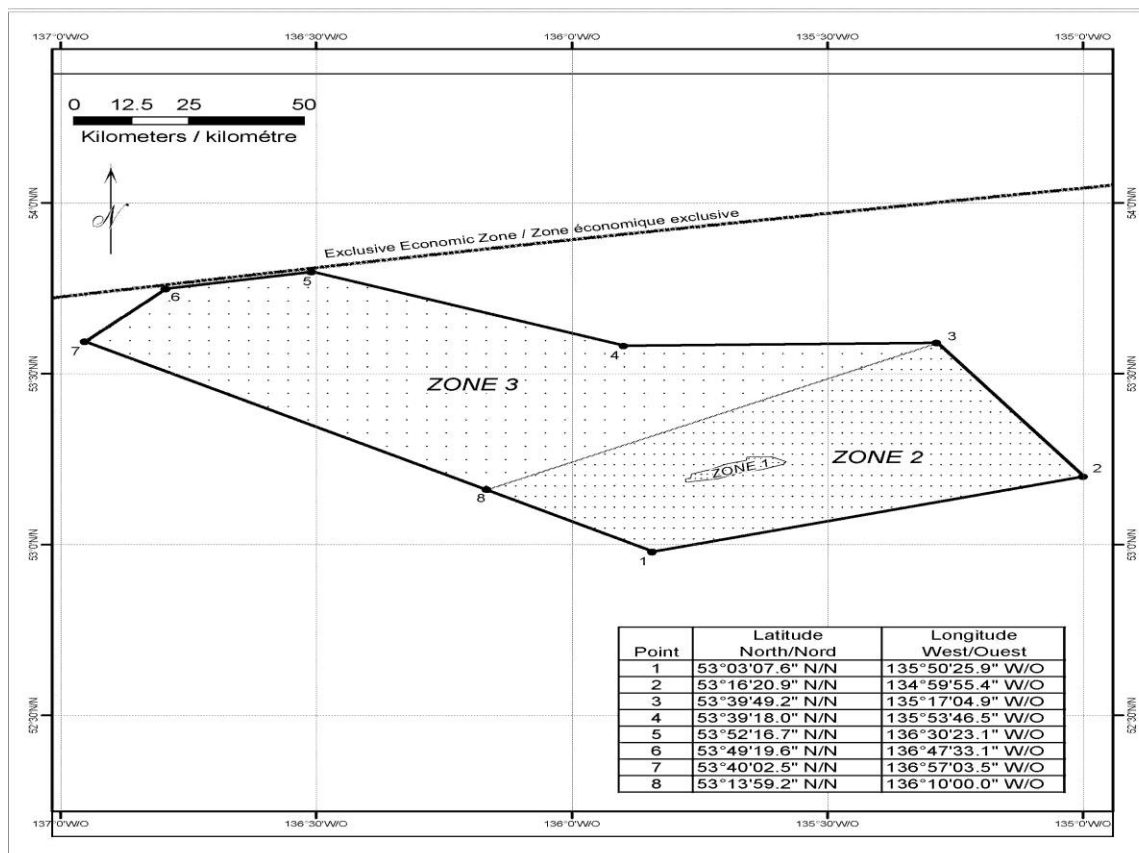


Figure 8. SGaan Kinghlas-Bowie Seamount Marine Protected Area. Boundary coordinates are shown here in degrees-minutes-seconds (DMS-format), as per the format in the *Bowie Seamount Marine Protected Area Regulations, 2008*.

The Government of Canada and the Council of the Haida Nation signed a Memorandum of Understanding in April 2007 which established the SK-B Management Board to facilitate the cooperative management and planning of the proposed MPA. As a result, DFO and the Council of the Haida Nation are collaboratively developing a management plan for the SK-B MPA which will consider advice from an advisory committee, stakeholders through existing processes, and the public. This management plan will elaborate on the regulations to implement the conservation and management objectives for the MPA and will address matters such as monitoring, enforcement and compliance.

Commercial fishing activities within the MPA are managed through the Integrated Fisheries Management process. Three zones are identified in this IFMP, some of which

are fisheries closures which are used to manage the sablefish fishery. Further details on the management of fisheries in the SK-B MPA can be found in Appendix 7.

Cold-Water Coral and Sponge Conservation Strategy: DFO's Pacific Region Cold-Water Coral and Sponge Conservation Strategy encompasses short and long-term goals and aims to promote the conservation, health and integrity of Canada's Pacific Ocean cold-water coral and sponge species. The Strategy also takes into consideration the need to balance the protection of marine ecosystems with the maintenance of a prosperous economy. It was created with input from stakeholders throughout the Pacific Region and will help regional partners and stakeholders to understand how DFO's existing programs and activities tie into cold-water coral and sponge conservation.

The Department, with the full support of the groundfish trawl industry, implemented measures to preserve four unique sponge reefs located in waters off central and northern British Columbia. These areas were last amended at the start of the 2007/2008 season.

These sponge reefs, discovered only recently, are some of the few known examples of living *Hexactinellid* sponge reefs in the world today. The reefs cover nearly 1,000 square kilometres of seabed in eastern Queen Charlotte Sound and Hecate Strait. These living fossil structures can reach more than 15 metres in height and are thought to be formed approximately 10,000 years ago. Due to the fragile skeleton nature of the reefs, it is believed that the sponge skeletons are susceptible to damage from physical contact by fishing gear. Additionally, the dense coverage of sponges provides habitat for a variety of invertebrate and fish species.

As part of the MPA designation process for this area, the Department is assessing potential impacts of other gear types to ensure current measures continue to provide the needed protection of the sponge reef ecosystems.

Strait of Georgia Sponge Reef Protection Measures: In 2014, the Department requested that fishers using bottom-contact fishing gear (prawn trap, crab trap, shrimp trawl, groundfish trawl and hook-and-line) voluntarily avoid nine areas containing glass sponge reefs in the Strait of Georgia and Howe Sound while the Department consulted on formal protection measures for the glass sponge reefs. Consultations with First Nations, commercial, recreational fishers and conservation organizations on protection measures to protect these glass sponge reefs from direct impacts from bottom-contact fishing included formal written correspondence, workshops and bilateral meetings.

After reviewing input from the consultation process, the Department decided to proceed with formal fishery closures and adhere to a protection zone of 150 meters around all nine reefs. Effective May 28th, 2015 all commercial and recreational bottom contact fishing activities for prawn, shrimp, crab and groundfish were prohibited within the areas listed below in order to protect the Strait of Georgia and Howe Sound Glass Sponge Reefs. These closures will be in effect until further notice. Closure locations are set out in section 8.5 of Appendix 8 to this IFMP.

Beginning April 1, 2016 these closures will also apply to First Nations FSC fisheries. First Nation Food, Social and Ceremonial (FSC) fisheries that use bottom contact fishing activities for prawn, shrimp, crab and groundfish are asked to voluntarily avoid these areas until the closures come into effect for their FSC fisheries.

Habitat and Coral Protection Measures in the Groundfish Trawl Fishery: In 2012, the Canadian Groundfish Research and Conservation Society (on behalf of the British Columbia commercial groundfish trawl industry) and the Pacific Marine Conservation Caucus agreed to innovative management measures that restricted trawl fishing to provide protection of coral and sponge habitat off the west coast of Canada. The objectives were:

- To reduce and manage the catch of corals and sponges by the British Columbia groundfish bottom trawl fishery;
- To reduce the impact of the British Columbia groundfish bottom trawl fishery on low energy and low productivity environments in deep waters off of the west coast of British Columbia;
- To ensure that the British Columbia groundfish bottom trawl fishery does not disproportionately affect any one particular benthic habitat type;
- To ensure that the British Columbia groundfish bottom trawl fishery is restricted to areas previously trawled between 1996-2011; and
- To improve the performance of the British Columbia groundfish bottom trawl fishery against habitat criteria used to evaluate the sustainability of fisheries.

Specific management measures adopted included:

- Freezing the footprint of groundfish bottom trawl activities;
- Establishing a combined habitat bycatch conservation limit (HBCL) for coral and sponges;
- Allocating the HBCL among groundfish trawl licence holders and allow for transferability within specified vessel caps with the groundfish trawl fleet; and
- The establishment of an encounter protocol for trawl tows where combined coral and sponge catch exceeds 20 kg.

The Department accepted these management measures and implemented them on April 2, 2012 for the groundfish bottom trawl fishery. Areas open and closed to the trawl fleet as a result of these measures are outlined in section 6 of Appendix 8 to this IFMP.

Policy for Managing the Impact of Fishing on Benthic Habitat, Communities and Species: Benthic ecosystems provide habitat, support food webs and are an important source of biodiversity. They also support many aquatic species that play an important social, cultural and economic role in the lives of many Canadians. It is imperative that these ecosystems are considered when managing oceans activities, including the harvest of fisheries resources. This includes the consideration of target species, non-target species, the ecosystems of which they are a part and the impact of fishing on these

ecosystems when making management decisions. This is the basis of an ecosystem approach to fisheries management, which, along with a precautionary approach, is key to the Sustainable Fisheries Framework.

To avoid serious or irreversible harm to sensitive benthic habitat, species and communities and otherwise address impacts to benthic habitat, communities and species, this policy follows a five (5) step process. Ongoing fishing activities in historically fished areas will be managed to address impacts of fishing on sensitive benthic areas through existing processes, including the advisory processes in place for the given fishery, following these steps. The management of proposed new fishing activities in frontier areas will be addressed through a separate procedure, also using these steps. For more information on this Policy, please visit the following web site:

<http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/benthi-eng.htm>

8.3. Gear Impacts

There is growing interest in assessing and mitigating the impacts of fishing gear on the seafloor because these habitats play an important role in maintaining fish and shellfish production. Unfortunately, major gaps still exist in our knowledge of how deep-sea ecosystems respond to different types of fishing disturbances. Simon Fraser University (SFU) and Fisheries and Oceans Canada (DFO) are collaborating with fishing industry members of the BC Seafood Alliance to complete a project entitled "An exposure-response methodology for assessing the impacts of bottom-fishing gear on benthic marine ecosystems".

The overall goal of this study is to develop exposure-response models by combining spatial mapping of bottom-fishing effort intensity and habitat (the exposure) with remotely-operated vehicle surveys of habitat-forming species density (the response). This approach provides a flexible and adaptive framework that builds the necessary information to support eco-certification of British Columbia's (BC) bottom-fisheries. In addition, a better understanding of how bottom habitat responds to fishing disturbances will help the fishing industry design operational changes that reduce or eliminate these impacts.

In 2009, the SFU/DFO/Industry team assembled information on fishing effort, bottom habitat, and biological communities in BC's offshore fishing areas and, in 2010, collaborated on a joint research cruise of Hecate Strait, B.C, collecting a combination of ROV video and still photo data, oceanographic data, benthic grab samples and acoustic multibeam bathymetry and backscatter data.

More recently, with support from the Natural Sciences and Engineering Research Council of Canada, along with funding and expertise from DFO and the Canadian Sablefish Association, a novel camera-motion sensor system was developed for assessing seabed impacts of trap gear. The systems were tested in October 2012 on the Canadian Sablefish Association's annual offshore trap survey. The resulting video and accelerometry data are being analyzed at SFU.

Gathering information on gear impacts from commercial groundfish fisheries continues to be an area of priority for both the Department and its stakeholders. This project is working towards improving data and developing management strategies to address the concerns.

9. ACCESS AND ALLOCATION

9.1. Access and Allocations

9.1.1. First Nations

Coastal First Nations harvest groundfish for FSC purposes under the *Aboriginal Communal Fishing Licences Regulations* or Treaty Harvest Agreements. In both cases, allocations are specified, and the fisheries are licenced and conducted under the authority of the Minister.

With respect to treaties, agreements are in place with the Nisga'a, Tsawwassen, Maa-nulth, and Tla'amin First Nations. Nisga'a, Tsawwassen, and Maa-nulth First Nations Treaties came into effect on May 11, 2000, April 1, 2009, and April 1, 2011, respectively. The Tla'amin Nation Final Agreement comes into effect on April 5, 2016.

Under each treaty, Fisheries Operation Guidelines (FOGs) set out the operational principles, procedures and guidelines needed to assist Canada, BC, and the First Nations in implementing Fisheries Chapters of their respective treaties and managing Treaty fisheries on an annual basis. The FOGs provide guidance on how management decisions with respect to treaty fisheries will be made via the Joint Fisheries Committee (JFC), how abundance is estimated, biological and harvesting considerations, catch monitoring and reporting requirements, etc. Each year the JFC established under each treaty makes recommendations to the Minister on the issuance of specific 'Harvest Documents' to licence the fishery for Domestic (food, social and ceremonial) harvests. Domestic fisheries will be exercised within geographic areas defined in each treaty.

More information on Treaties can be found at: <http://www.BCtreaty.net/>.

9.1.1.1. Maa-nulth fisheries

Maa-nulth domestic fisheries

The Maa-nulth First Nations comprise five individual First Nations; Huu-ay-aht First Nations, Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations, Toquaht Nation, Uchucklesaht Tribe and the Yuułu?ił'ath First Nation on the west coast of Vancouver Island.

The domestic (food, social, and ceremonial) allocations for groundfish under the Maa-nulth First Nations Final Agreement are as follows:

1. Halibut: The Maa-nulth Fish Allocation for halibut is 26,000 pounds (net weight, dressed, head off) plus 0.39% of the Halibut Canadian Total Allowable Catch (net weight, dressed, head off).
2. Rockfish: The Maa-nulth Fish Allocation of Rockfish is 11,250 pounds of whole fish, plus 2.46% of the Commercial Rockfish Outside Total Allowable Catch.
3. Groundfish: The Maa-nulth Fish Allocation of Groundfish is 13,000 pounds of whole fish.
4. Sablefish: The Maa-nulth Fish Allocation for Sablefish is 0.082% of the Sablefish Canadian Total Allowable Catch.

Other groundfish species are currently unallocated species under the terms of the treaty. Unallocated species may be harvested under a Maa-nulth First Nation Fishing Right in accordance with a Harvest Document.

Maa-nulth Commercial Fisheries

In addition to the allocation of fish for domestic purposes, Maa-nulth has an allocation for commercial catch outside of the Treaty as identified in the “Maa-nulth First Nation Harvest Agreement”. The allocations in the Harvest Agreement do not affirm aboriginal or Treaty rights. Fishing under the Harvest Agreement will be comparable to the requirements of the current commercial fishery.

Commercial groundfish allocations are expressed as limits (i.e., “up to” amounts) under the Harvest Agreement:

1. Halibut: up to 2% of the coastwide commercial halibut TAC.
2. Rockfish: up to 2.6178% of the commercial ZN-Outside rockfish TACs.
3. Sablefish: up to 0.34% of the coastwide commercial sablefish TAC.

9.1.1.2. Tla’amin domestic fisheries

The domestic (food, social, and ceremonial) allocations for groundfish under the Tla’amin Nation Final Agreement are as follows:

1. In any year, the Tla’amin Fish Allocation for the aggregate of rockfish and lingcod is a maximum of 5,000 lbs.
2. In any year, the Tla’amin Fish Allocation for all groundfish other than rockfish and lingcod is a maximum of 1,000 lbs.

9.1.1.3. Tsawwassen and Nisga’a fisheries

Groundfish are currently unallocated species under the terms of the Tsawwassen and Nisga’a treaties. As authorised by their treaties, they may harvest groundfish for domestic purposes, subject to conservation, public health, or public safety, in their respective

fishing areas under the terms of annual fishing plans signed off by the treaty nations and Canada.

9.1.1.4. Other First Nations

In addition to fishing opportunities for FSC purposes (or domestic purposes for treaty bands), DFO acknowledges that in *Ahousaht Indian Band et al. v. Canada and British Columbia*, the courts have found that five Nuu-chah-nulth First Nations located on the West Coast of Vancouver Island - Ahousaht, Ehattesaht, Hesquiaht, Mowachaht/Muchalaht, and Tla-o-qui-aht - have an “aboriginal rights to fish for any species of fish within their Fishing Territories and to sell that fish, with the exception of geoduck”.

The Department is working with the First Nations pursuant to the rights found by the courts, to find “the manner in which the plaintiffs’ rights can be accommodated and exercised without jeopardizing Canada’s legislative objectives and societal interests in regulating the fishery.”

DFO has been providing the First Nations with communal commercial groundfish fishing licences and quota. Discussions are on-going with the five First Nations regarding continuing this access for 2016 and potential demonstration fishery proposals.

9.1.2. Recreational

Daily and possession limits are in place for recreational catch of groundfish species. Annual limits and size limits are also in place for several groundfish species such as lingcod and halibut. These are described in the British Columbia Tidal Waters Sport Fishing Guide available at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/index-eng.html>.

There are several instances where total recreational catch is managed to specified amounts. Recreational fishing for halibut is managed to an annual coastwide allocation. As a result of the Rockfish Conservation Strategy drafted in 2001, recreational catch of rockfish and lingcod in the Strait of Georgia is also managed to stay within specified amounts, referred to as “management caps”. These arrangements are summarised below.

Since 2011, an optional experimental program has also been in place which allows interested recreational harvesters to temporarily transfer commercial halibut quota onto an experimental licence for the purposes of recreational fishing. This pilot program allows those who choose to participate the opportunity to fish for halibut beyond the daily, possession, size, and annual limits or beyond the season closure date for the regular recreational halibut fishery. In February 2012, the Minister announced that the Department would move forward with regulatory changes to continue this transfer mechanism for the long term. Please refer to the DFO Media webpage for more information regarding this decision: <http://www.dfo-mpo.gc.ca/media-eng.htm>.

9.1.2.1. Halibut Recreational Allocation

In February 2012 Minister Ashfield announced a change to the Halibut Allocation Policy. The 2003 policy, which provided 12% of the commercial-recreational TAC to the recreational sector and 88% to the commercial sector, has been changed to allocate 15% of the commercial-recreational TAC to the recreational sector and 85% to the commercial sector. Please refer to the DFO Media webpage for more information regarding this decision: <http://www.dfo-mpo.gc.ca/media-eng.htm>.

Based on this allocation formula and the 2016 commercial-recreational TAC, the recreational halibut coastwide allocation for 2015 is 1,100,950 pounds.

9.1.2.2. Strait of Georgia Rockfish and Lingcod management caps

In response to conservation concerns for inshore rockfish and lingcod in the Strait of Georgia the Department implemented annual recreational fishery management caps intended to meet rebuilding objectives while providing opportunities to recreational anglers to retain rockfish and lingcod. In 2002, an annual management cap of 20,000 pieces of rockfish was implemented in Areas 12 to 13, and sub-Areas 20-5 to 20-7 and 29-5. In 2006, a lingcod management cap of 5,000 pieces was implemented and in 2009 it was increased to 7,000 pieces for the same areas. Areas 28 and the rest of Area 29 were closed to the retention of rockfish and lingcod.

In order to keep the recreational fishery within these caps other management measures were introduced. By 2010, the management measures included daily and possession limits of 1 and 2 respectively for both lingcod and rockfish, open times between May 1 and September 30, and an annual limit of 10 lingcod. These management measures remain in effect, and the Department monitors catch against these caps on an annual basis. For further information please read *Towards an Inshore Rockfish Conservation Plan* (<http://www.dfo-mpo.gc.ca/Library/315667.pdf>) and the *Management Framework for Strait of Georgia Lingcod* (http://www.dfo-mpo.gc.ca/CSAS/Csas/DocREC/2005/RES2005_048_e.pdf).

9.1.3. Aquaculture

Fisheries and Oceans Canada continues to support the research and development of the aquaculture sector. The Department will provide the aquaculture industry with reasonable access, by scientific licence, to the wild groundfish resource to assist industry development (growth and diversification). Requests to access the wild resource will be contingent upon stakeholders providing detailed project proposals for review and approval by the Department.

Requests for access to the wild resource will be reviewed based on the provision of specified criteria by the proponent (see details below). Decisions will be provided in writing to the applicant. The Department may require observers on vessels conducting collection trips and dockside monitoring of all fish harvested for aquaculture purposes at the vessel's own expense.

Applications for broodstock capture should include:

- a) Proposed time and location(s) where the fish will be captured.
- b) Name, vessel registration number (VRN) and licence number of the vessel to be used.
- c) Description and location of the facility where the fish are to be held (including aquaculture permit number if a fish farm).
- d) Transplants permit application number.
- e) Detailed project description.
- f) Detailed reporting framework.

More information can be found at: <http://www.pac.dfo-mpo.gc.ca/aquaculture/index-eng.html>.

Currently, there are 4 tonnes allocated from the sablefish TAC to the aquaculture industry to support broodstock collection for sablefish aquaculture.

9.1.4. Annual Research Allocations

Allocations are made each year for research to account for the mortalities associated with survey catches within TACs. This includes the outside longline synoptic survey, the International Pacific Halibut Commission longline standardized stock assessment survey, the trawl multi-species surveys, and the Sablefish trap survey. In some cases, allocations may also be made in excess of forecasted survey catches to support the costs of completing select science projects. These allocations are made based on the Minister of Fisheries and Oceans' authority to allocate fish or fishing gear for the purpose of financing scientific and fisheries management activities that are described in a joint project agreement entered into with any person or body, or any federal or provincial minister, department, or agency.

In general, research allocations are deducted from the fish available to the commercial fishery, by sector, prior to the definition of commercial TACs used for the purposes of defining allocations on licences. However, the sectoral allocations based on percentage splits between commercial sectors defined in section 9.1.5 below are calculated *before* research allocations are deducted. Further details on the allocations of fish for financing scientific and management activities are identified in the relevant harvest plans appended to this plan.

Species	Trawl surveys (tonnes)	Longline surveys (tonnes)	Sablefish surveys, tagging, catch sampling (tonnes)	Total (tonnes)
Bocaccio Rockfish	0.2	0.0	0.0	0.2
Canary Rockfish	3.3	6.0	0.0	9.3
Copper, China, Tiger Rockfish	0.0	2.0	0.0	2.0

Pacific Ocean Perch	57.1	0.0	0.0	57.1
Quillback Rockfish	0.1	5.0	0.0	5.1
Redbanded Rockfish	1.4	11.0	0.0	12.4
Redstripe Rockfish	11.4	0.0	0.0	11.4
Rougheye Rockfish	10.3	20.0	0.0	30.3
Shorthead Rockfish	0.8	4.0	0.0	4.8
Silvergrey Rockfish	10.7	10.0	0.0	20.7
Widow Rockfish	1.5	0.0	0.0	1.5
Yelloweye Rockfish	0.3	5.8	0.0	6.1
Yellowmouth Rockfish	5.0	3.0	0.0	8.0
Yellowtail Rockfish	6.2	0.0	0.0	6.2
Shortspine Thornyheads	4.1	1.0	0.0	5.1
Longspine Thornyheads	0.4	0.0	0.0	0.4
Lingcod	1.6	2.9	0.0	4.5
Pacific Cod	2.4	0.0	0.0	2.4
Sablefish	6.6	0.0	70.0	76.6
English/Lemon Sole	1.9	0.0	0.0	1.9
Dover Sole	4.5	0.0	0.0	4.5
Petrale Sole	1.1	0.0	0.0	1.1
Rock Sole	0.3	0.0	0.0	0.3
Spiny Dogfish	17.9	0.0	0.0	17.9
Walleye Pollock	0.3	0.0	0.0	0.3
Pacific Hake	2.5	0.0	0.0	2.5
Arrowtooth Flounder	27.5	0.0	0.0	27.5
Big Skate	0.1	0.0	0.0	0.1
Longnose Skate	1.9	0.0	0.0	1.9
Pacific Halibut*	1.6	37.2	0.0	38.8

*The halibut poundage for the groundfish trawl survey is part of the trawl fishery's halibut bycatch mortality cap. The groundfish trawl fishery has a bycatch mortality cap of 454 tonnes that is not part of the allocated commercial TAC.

9.1.5. Commercial

The commercial total allowable catch for various groundfish species are allocated between the different groundfish sectors. Formal discussions between the hook and line rockfish (ZN), halibut and trawl sectors were initiated in 2000 to establish individual rockfish species allocations between the sectors to modify the 1997 adopted "92/8" trawl/hook and line allocation. The agreed to allocation of groundfish species between the commercial sectors are as follows:

9.1.5.1. Rockfish Species

Species	Trawl %	ZN %	Halibut %
Canary	87.70%	11.77%	0.53%
Longspine Thornyhead	95.35%	2.29%	2.36%
Pacific Ocean Perch	99.98%	0.02%	0.00%
Quillback	2.56%	87.97%	9.47%
Copper, China, Tiger	2.56%	87.97%	9.47%
Redbanded	50.00%	37.50%	12.5%
Redstripe	97.23%	2.77%	0.00%
Rougheye	55.80%	41.17%	3.03%
Shortspine Thornyhead	95.40%	2.27%	2.33%
Shortraker	52.30%	43.92%	3.78%
Silvergray	88.43%	10.97%	0.60%
Widow	98.21%	1.79%	0.00%
Yelloweye	2.54%	64.34%	33.12%
Yellowmouth	96.77%	2.49%	0.74%
Yellowtail	98.91%	1.09%	0.00%

9.1.5.2. Non-quota Rockfish Species

Non-quota Species	Trawl %	Halibut/ZN %
Aurora Rockfish	90.00%	10.00%
Black Rockfish	14.00%	86.00%
Blue Rockfish	5.00%	95.00%
Brown Rockfish	5.00%	95.00%
Chillipepper Rockfish	65.00%	35.00%
Darkblotch Rockfish	99.00%	1.00%
Dusky Rockfish	50.00%	50.00%
Greenstripe Rockfish	96.00%	4.00%
Harlequin Rockfish	99.00%	1.00%
Bocaccio Rockfish ¹⁶	93.00%	7.00%
Rosethorn Rockfish	65.00%	35.00%
Sharpchin Rockfish	99.00%	1.00%
Shortbelly Rockfish	0.00%	100.00%
Splitnose Rockfish	99.00%	1.00%
Vermillion Rockfish	1.00%	99.00%

9.1.5.3. Other Groundfish

Species*	Trawl %	Hook and Line / trap %
Lingcod	74.00%	26.00%
Dogfish	32.00%	68.00%

¹⁶ Bocaccio is currently a quota species in the trawl fishery, but not in the hook and line fisheries.

Species*	Trawl %	Hook and Line / trap %
Hake, pollock, Pacific cod & sole	100.00%	0.00%
Sablefish	8.75%	91.25%

*Halibut is not permitted for retention by trawl gear so there is no percentage of an allocation assigned to trawl.

Skates have remained an unallocated species in past allocation discussions. To accommodate the introduction of commercial TACs for Big and Longnose skates, a commercial allocation formula was introduced for these species in 2015/16. Following consultation with commercial fishery representatives and other interests, an area-based formula was defined based on 2006-2012 catch history.

Sector	Longnose Skate			Big Skate		
	Area			Area		
	3CD	5AB	5CDE	3CD	5AB	5CDE
Groundfish Trawl	62.83%	32.83%	20.28%	24.55%	91.48%	92.07%
Halibut	14.19%	48.49%	59.80%	26.72%	5.97%	6.34%
Lingcod	0.00%	0.01%	0.00%	0.00%	0.01%	0.00%
Rockfish Inside	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Rockfish Outside	1.50%	8.61%	8.53%	1.93%	1.20%	0.56%
Sablefish	11.26%	9.47%	10.55%	4.16%	0.72%	0.95%
Spiny Dogfish	10.22%	0.57%	0.84%	42.63%	0.62%	0.08%

9.1.5.4. Commercial Total Allowable Catches

As a result of rounding, the TACs by management area do not sum to the sector totals for some species. For the exact TAC values, please contact a member of the Groundfish Management Unit, found in Appendix 1. Portions of some of the TACs listed here will be allocated for research purposes. Portions of the ZN Outside TAC exclude amounts allocated for research purposes. Details of research allocations are found in the harvest plans included as appendices to the full IFMP document.

Species	Area	Halibut (tonnes)	Sablefish (tonnes)	ZN Outside (tonnes)	ZN Inside (tonnes)	Trawl (tonnes)	Dogfish (tonnes)	Lingcod (tonnes)
Yellowtail rockfish	3C	0	0	14*	0	1,224	0	0
	3D, 5A/B, 5C/D/E	0	0	47*	0	4,216	0	0
	Sector total	0	0	60*	0	5,440	0	0
Widow rockfish	Coastwide	0	0	42*	0	2,316	0	0
Canary rockfish	3C, 3D	1	0	23	0	503	0	0
	5A, 5B	2	0	40	0	197	0	0
	5C, 5D	1	0	18	0	79	0	0
	5E	1	0	19	0	10	0	0
	Sector total	5	0	101	0	789	0	0
Silvergray rockfish	3C/D	2	0	41	0	332	0	0
	5A/B	4	0	80	0	646	0	0
	5C/D	4	0	73	0	587	0	0
	5E	3	0	47	0	382	0	0

Species	Area	Halibut (tonnes)	Sablefish (tonnes)	ZN Outside (tonnes)	ZN Inside (tonnes)	Trawl (tonnes)	Dogfish (tonnes)	Lingcod (tonnes)
	Sector total	13	0	241	0	1,945	0	0
Pacific ocean perch	3C/D	0	0	0	0	750	0	0
	5A/B	0	0	0	0	1,687	0	0
	5C	0	0	0	0	1,544	0	0
	5D/E	0	0	0	0	1,200	0	0
	Sector total	0	0	1	0	5,192	0	0
Yellowmouth rockfish	3C	1	0	4	0	219	0	0
	3D, 5A/B	6	0	20	0	1,135	0	0
	5C/D	4	0	13	0	685	0	0
	5E	7	0	24	0	325	0	0
	Sector total	18	0	60	0	2,364	0	0
Rougheye rockfish	Coastwide	33	0	451	0	636	0	0
Shortraker rockfish	Coastwide	9	0	102	0	126	0	0
Redstripe rockfish	3C	0	0	5*	0	173	0	0
	3D, 5A/B	0	0	22*	0	772	0	0
	5C/D	0	0	9*	0	330	0	0
	5E	0	0	7*	0	246	0	0
	Sector total	0	0	43*	0	1,521	0	0

Species	Area	Halibut (tonnes)	Sablefish (tonnes)	ZN Outside (tonnes)	ZN Inside (tonnes)	Trawl (tonnes)	Dogfish (tonnes)	Lingcod (tonnes)
Shortspine thornyheads	Coastwide	17	0	17	0	735	0	0
Longspine thornyheads	Coastwide	10	0	10	0	405	0	0
Redbanded rockfish	Coastwide	74	0	210	0	295	0	0
Yelloweye rockfish	3C, 3D, 5A	8	0	38	0	1	0	0
	5B	17	0	20	0	1	0	0
	5C, 5D	12	0	21	0	1	0	0
	5E	19	0	25	0	2	0	0
	4B	1	0	0	6	0	0	0
	Sector total	57	0	105	6	5	0	0
Quillback rockfish	3C, 3D, 5A	3	0	43	0	0	0	0
	5B	3	0	28	0	0	0	0
	5C, 5D	6	0	32	0	0	0	0
	5E	4	0	6	0	0	0	0
	4B	0	0	22	22	0	0	0
	Sector total	16	0	131	22	4	0	0
Copper, China and Tiger rockfish	3C, 3D, 5A	1	0	24	0	0	0	0
	5B	1	0	7	0	0	0	0
	5C, 5D	4	0	19	0	0	0	0

Species	Area	Halibut (tonnes)	Sablefish (tonnes)	ZN Outside (tonnes)	ZN Inside (tonnes)	Trawl (tonnes)	Dogfish (tonnes)	Lingcod (tonnes)
	5E	0.3	0	1	0	0	0	0
	4B	0	0	3	3	0	0	0
	Sector total	6.3	0	54	3	1	0	0
Bocaccio rockfish	Coastwide	0	0	0	0	80	0	0
Pacific cod	3C/D	0	0	0	0	500	0	0
	5A/B	0	0	0	0	200	0	0
	5C/D/E	0	0	0	0	700	0	0
	Sector total	0	0	0	0	1,400	0	0
Dover sole	3C/D	0	0	0	0	1,375	0	0
	5C/D/E	0	0	0	0	1,100	0	0
	5A/B	0	0	0	0	598	0	0
	Sector total	0	0	0	0	3,073	0	0
Rock sole	3C/D	0	0	0	0	102	0	0
	5A/B	0	0	0	0	650	0	0
	5C/D	0	0	0	0	800	0	0
	Sector total	0	0	0	0	1,552	0	0
Lemon sole	3C/D, 5A/B	0	0	0	0	186	0	0
	5C/D/E	0	0	0	0	636	0	0

Species	Area	Halibut (tonnes)	Sablefish (tonnes)	ZN Outside (tonnes)	ZN Inside (tonnes)	Trawl (tonnes)	Dogfish (tonnes)	Lingcod (tonnes)
	Sector total	0	0	0	0	822	0	0
Petrale sole	Coastwide	0	0	0	0	900	0	0
Lingcod	3C	0	0	0	0	800	0	150
	3D	0	0	0	0	440	0	360
	5A, 5B	0	0	0	0	862	0	200
	5C, 5D, 5E	0	0	0	0	580	0	420
	4B	0	0	0	0	0	0	38**
	Coastwide total	0	0	0	0	2,572	0	1,168
Spiny Dogfish	3C, 3D, 5A, 5B, 5C, 5D, 5E	0	0	0	0	3,840	8,160	0
	4B	0	0	0	0	640	1,360	0
	Coastwide total	0	0	0	0	4,480	9,520	0
Sablefish	Coastwide	0	1698	0	0	163	0	0
Pollock	Gulf	0	0	0	0	1,115	0	0
	5A/B (includes Area 12)	0	0	0	0	1,790	0	0
	5C/D/E	0	0	0	0	1,320	0	0
	Coastwide total	0	0	0	0	4,225	0	0
Hake	Gulf	0	0	0	0	7,000	0	0
	Offshore ***	0	0	0	0	30,000	0	0

Species	Area	Halibut (tonnes)	Sablefish (tonnes)	ZN Outside (tonnes)	ZN Inside (tonnes)	Trawl (tonnes)	Dogfish (tonnes)	Lingcod (tonnes)
Halibut	Coastwide	2785	0	0	0	454*****	0	0
Big skate	3C/D	13	2	1	0	12	21	0
	5A/B	22	3	4	0	341	2	0
	5C/D/E	39	6	3	0	561	1	0
	Sector total	74	11	9	0	914	24	0
Longnose skate	3C/D	20	16	2	0	87	14	0
	5A/B	47	9	8	0	32	1	0
	5C/D/E	51	9	7	0	17	1	0
	Sector total	168	48	25	0	195	22	0
Arrowtooth flounder	Coastwide	0	0	0	0	17,500	0	0

* This tonnage is not allocated to individual licence holders, nor is it transferable.

** The Lingcod coastwide total includes the 38 tonne allocation to cover 4B trip limits. This tonnage is not allocated to licence holders, nor is it transferable.

*** This is a notional TAC for initial licence issuance – The actual TAC will be announced in early April 2015.

****The groundfish trawl fishery has a bycatch mortality cap of 454 tonnes that is not part of the allocated commercial TAC. Halibut caught while fishing under the authority of a groundfish trawl licence cannot be retained and must be returned to the water as quickly as possible.

9.1.5.5. Commercial Species-Area Groups

All groundfish hook and line licence holders will be permitted to hold quota for up to 40 species-area groups of holdings. Landings of other groundfish will be managed through trip limits or landings allowances. Additional species areas groups are in place for the groundfish trawl fishery and can be found in Appendix 8.

Pacific Halibut (Coastwide)	Silvergray rockfish (5E)
Sablefish (Coastwide)	Yelloweye rockfish (3C, 3D, 5A)
Lingcod (3D)	Yelloweye rockfish (5B)
Lingcod (3C)	Yelloweye rockfish (5C, 5D)
Lingcod (5A, 5B)	Yelloweye rockfish (5E)
Lingcod (5C, 5D, 5E)	Yelloweye rockfish (4B)
Dogfish (3C, 3D, 5A, 5B, 5C, 5D, 5E)	Quillback rockfish (3C, 3D, 5A)
Dogfish (4B)	Quillback rockfish (5B)
Big skate (3C, 3D)	Quillback rockfish (5C, 5D)
Big skate (5A, 5B)	Quillback rockfish (5E)
Big skate (5C, 5D, 5E)	Quillback rockfish (4B)
Longnose skate (3C, 3D)	Copper, China and Tiger rockfish (3C, 3D, 5A)
Longnose skate (5A, 5B)	Copper, China and Tiger rockfish (5B)
Longnose skate (5C, 5D, 5E)	Copper, China and Tiger rockfish (5C, 5D)
Canary rockfish (3C, 3D)	Copper, China and Tiger rockfish (5E)
Canary rockfish (5A, 5B)	Copper, China and Tiger rockfish (4B)
Canary rockfish (5C, 5D)	Rougheye rockfish (Coastwide)
Canary rockfish (5E)	Redbanded rockfish (Coastwide)
Silvergray rockfish (3C, 3D)	Shortraker rockfish (Coastwide)
Silvergray rockfish (5A, 5B)	Shortspine thornyhead (Coastwide)
Silvergray rockfish (5C, 5D)	

9.1.5.6. Outgoing Commercial Sector Caps

The following caps are the amount of quota species, in pounds, permitted to leave a sector. These figures represent initial caps established at the outset of the 2016 fishing season. The figures can change regularly. Please consult the DFO website for the most current figures: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.htm>.

Species	Area	Sector (Outgoing)						
		Halibut (pounds)	Sablefish (pounds)	ZN Outside (pounds)	ZN Inside (pounds)	Trawl (pounds)	Dogfish (pounds)	Lingcod (pounds)
Canary rockfish	3C, 3D	2,309	No Limit	51,248	0	103,460	No Limit	No Limit
	5A, 5B	3,948	No Limit	87,632	0	50,706	No Limit	No Limit
	5C, 5D	1,830	No Limit	40,598	0	19,841	No Limit	No Limit
	5E	1,904	No Limit	42,378	0	7,111	No Limit	No Limit
Lingcod	3C	No Limit	No Limit	No Limit	0	226,367	No Limit	328,799
	3D	No Limit	No Limit	No Limit	0	93,699	No Limit	789,119,595,242
	5A, 5B	No Limit	No Limit	No Limit	0	351,680	No Limit	440,920
	5C, 5D, 5E	No Limit	No Limit	No Limit	0	443,835	No Limit	925,930
Pacific Halibut	Coastwide	893,863	No Limit	No Limit	No Limit	0	No Limit	No Limit
Quillback rockfish	3C, 3D, 5A	5,691	No Limit	94,987	0	0	No Limit	No Limit
	5B	5,769	No Limit	2,181	0	0	No Limit	No Limit
	5C, 5D	14,147	No Limit	69,807	0	0	No Limit	No Limit
	5E	7,933	No Limit	14,278	0	0	No Limit	No Limit
	4B	No Limit	0	0	2,677	0	0	0
Copper, China and	3C, 3D, 5A	3,201	No Limit	53,430	0	0	No Limit	No Limit

		Sector (Outgoing)						
Species	Area	Halibut (pounds)	Sablefish (pounds)	ZN Outside (pounds)	ZN Inside (pounds)	Trawl (pounds)	Dogfish (pounds)	Lingcod (pounds)
Tiger rockfish	5B	1,353	No Limit	14,586	0	0	No Limit	No Limit
	5C, 5D	8,670	No Limit	42,785	0	0	No Limit	No Limit
	5E	597	No Limit	1,075	0	0	No Limit	No Limit
	4B	No Limit	0	0	323	0	0	0
Rougheye rockfish	Coastwide	73,129	No Limit	993,633	0	744,322	No Limit	No Limit
Sablefish	Coastwide	No Limit	590,127	No Limit	0	42,873	No Limit	No Limit
Shortraker rockfish	Coastwide	19,301	No Limit	224,263	0	69,999	No Limit	No Limit
Shortspine thornyhead	Coastwide	38,462	No Limit	37,496	0	381,843	No Limit	No Limit
Redbanded rockfish	Coastwide	162,500	No Limit	487,500	0	585,000	No Limit	No Limit
Silvergrey rockfish	3C, 3D	3,091	No Limit	56,519	0	23,104	No Limit	No Limit
	5A, 5B	6,031	No Limit	110,258	0	45,480	No Limit	No Limit
	5C, 5D	5,473	No Limit	100,066	0	40,697	No Limit	No Limit
	5E	3,560	No Limit	65,089	0	34,451	No Limit	No Limit
Spiny Dogfish	3C, 3D, 5A, 5B, 5C, 5D, 5E	No Limit	No Limit	No Limit	0	4,232,832	16,190,582	No Limit
	4B	No Limit	0	0	No Limit	1,269,850	25,000	0
Yelloweye rockfish	3C, 3D, 5A	17,155	No Limit	84,744	0	0	No Limit	No Limit
	5B	37,232	No Limit	43,507	0	0	No Limit	No Limit

		Sector (Outgoing)						
Species	Area	Halibut (pounds)	Sablefish (pounds)	ZN Outside (pounds)	ZN Inside (pounds)	Trawl (pounds)	Dogfish (pounds)	Lingcod (pounds)
	5C, 5D	27,037	No Limit	47,684	0	0	No Limit	No Limit
	5E	42,909	No Limit	54,373	0	0	No Limit	No Limit
	4B	0	0	0	8,000	0	0	0
Big skate	3C, 3D	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	5A/B	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	5C/D/E	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
Longnose skate	3C, 3D	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	5A/B	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	5C/D/E	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit

9.1.5.7. Incoming Commercial Sector Caps

The following caps are the amount of quota species, by pounds, permitted to enter a sector. These figures represent initial caps established at the outset of the 2016 fishing season. The figures can change regularly. Please consult the DFO website for the most current figures: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.htm>.

Species	Area	Sector (Incoming)						
		Halibut (pounds)	Sablefish (pounds)	ZN Outside (pounds)	ZN Inside (pounds)	Trawl (pounds)	Dogfish (pounds)	Lingcod (pounds)
Canary rockfish	3C, 3D	13,000	26,000	2,000	-	86,521	11,682	4,673
	5A, 5B	13,686	43,099	2,000	-	29,179	2,683	2,236
	5C, 5D	10,922	4,710	2,000	-	11,983	4,202	2,801
	5E	10,625	6,503	2,000	-	13,289	1,446	1,033
Lingcod	3C	73,353	62,347	60,000	0	144,613	100,000	30,000•
	3D	131,211	77,632	200,000	0	31,441	30,243	20,000•
	5A, 5B	256,192	84,119	250,000	0	95,244	32,045	75,000•
	5C, 5D, 5E	549,647	133,623	250,000	0	192,863	43,632	200,000•
Pacific Halibut	Coastwide	0	192,726	220,000	25,000	0	373,137	80,000
Quillback rockfish	3C, 3D, 5A	38,400	1,920	5,760	0	0	19,200	4,660
	5B	16,200	810	4,610	0	0	2,430	1,829
	5C, 5D	31,000	1,240	8,680	0	0	1,612	5,036
	5E	13,950	1,860	5,344	0	0	279	542

		Sector (Incoming)						
Species	Area	Halibut (pounds)	Sablefish (pounds)	ZN Outside (pounds)	ZN Inside (pounds)	Trawl (pounds)	Dogfish (pounds)	Lingcod (pounds)
	4B	No Limit	0	0	0	0	2,677	0
Copper, China and Tiger rockfish	3C, 3D, 5A	21,600	1,080	3,240	0	0	10,800	2,622
	5B	3,800	190	1,081	0	0	570	429
	5C, 5D	19,000	760	5,320	0	0	988	3,086
	5E	1,050	140	402	0	0	21	41
	4B	No Limit	0	0	0	0	323	0
Big skate	3C, 3D	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	5A, 5B	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	5C, 5D, 5E	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
Longnose skate	3C, 3D	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	5A, 5B	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit
	5C, 5D, 5E	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit	No Limit

Species	Area	Sector (Incoming)						
		Halibut (pounds)	Sablefish (pounds)	ZN Outside (pounds)	ZN Inside (pounds)	Trawl (pounds)	Dogfish (pounds)	Lingcod (pounds)
Rougheye rockfish	Coastwide	700,000	800,000	308,644	0	500,000	20,000	200
Sablefish	Coastwide	400,000	100,000	100,000	0	100,000	30,000	3,000
Shortraker rockfish	Coastwide	160,000	200,000	70,548	-	45,390	10,000	200
Shortspine thornyhead	Coastwide	379,124	300,000	114,640	0	32,268	10,000	200
Redbanded rockfish	Coastwide	253,948	500,000	761,842	0	914,210	20,000	20,000
Silvergrey rockfish	3C, 3D	20,000	7,000	8,818	-	25,000	2,500	5,545
	5A, 5B	50,000	20,000	17,637	-	47,151	3,000	5,500
	5C, 5D	50,000	6,000	10,000	-	38,799	4,000	2,862
	5E	40,000	20,000	11,023	-	20,342	500	2,232
Spiny Dogfish	3C, 3D, 5A, 5B, 5C, 5D, 5E	5,000,000	2,000,000	400,000	0	189,388	4,232,832	0
	4B	272,311	0	0	25,000	0	972,539	0
Yelloweye rockfish	3C, 3D, 5A	53,655	11,208	8,829	0	0	17,584	10,521
	5B	35,754	3,923	30,388	0	0	3,269	3,300
	5C, 5D	36,946	3,297	16,553	0	0	3,056	13,630
	5E	46,033	15,152	27,429	0	0	199	8,873
	4B	0	0	0	0	0	8,000	0

° Incoming Lingcod quota to the Lingcod sector must have originated from the Trawl sector.

10. COMMERCIAL MANAGEMENT MEASURES

It is important that all vessel owners, licence holders and harvesters thoroughly review this management plan and licence conditions prior to fishing.

10.1. Commercial Sector Groups

There are seven distinct commercial groundfish sector groups, Groundfish trawl (T), Halibut (L), Sablefish (K), Inside Rockfish (ZNI), Outside Rockfish (ZNO) and the Lingcod and Dogfish fisheries that are managed as separate fisheries using ITQs.

10.2. Individual Vessel Accountability and Responsibility

Accountability (documenting all catch in a fishing logbook) and responsibility (acquiring ITQ to account for mortality of all legal/marketable sized groundfish that are managed under species and area TACs as referenced in Section 9.1.5) are two key elements of the commercial management system. Vessels are individually accountable for their catch, both directed and non-directed. Subject to species, area, time and gear closures, along with vessel caps and trip limits, vessels will be permitted to land non-directed catch.

Other groundfish species not managed under species and area TACs will be managed under trip limits or will have no limits. Harvesters should reference licence conditions for more details. A vessel's catch is calculated by adding both landed weight and the estimated mortality of all catch either utilized at-sea or released at-sea. Vessels landing fish in excess of the ITQ holdings identified in licence conditions and the allowable overage will be restricted from further fishing opportunities until such time as additional ITQ has been acquired.

DFO and the groundfish trawl industry agreed to a two-step approach to instil full responsibility for catch by eliminating the designation of catch as marketable and non-marketable for fish released at-sea. The 2011/2012 fishing season marked the first year of one hundred (100) percent responsibility of all species caught within the groundfish trawl fishing fleet. The objective is to ensure full accountability and responsibility for catch of all quota species while continuing to provide incentive for better utilization of catch, reduce at-sea releases and development of improved fishing practices.

10.3. Sector Caps

To ensure that harvesters have access to non-directed catch from other sectors, sector caps have been established that limit the amount of ITQ from one sector that may be accessed by any other sector. In addition, each sector has identified a quantity of ITQ that is permitted to leave the sector. The initial sector access caps and access provided are listed in Section 9.1.5.6 and Section 9.1.5.7. The figures in those sections can change regularly. Please consult the DFO website for the most current figures: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.htm>.

10.4. Reallocations of Individual Quota

Subject to annual species caps and sector holding caps, the temporary reallocations of ITQ between vessels and between commercial sectors will be permitted.

Permanent reallocations of ITQ are restricted to intra-sector reallocations, specifically Halibut species within the Halibut sector, Sablefish species within the Sablefish sector, and several groundfish species within the Groundfish Trawl sector. All temporary and permanent reallocations are subject to the individual sector rules. The Groundfish Management Unit (GMU) has worked to make the necessary changes to the quota management system to allow for permanent intra-sector reallocations for the remaining species. Permanent intra-sector reallocations will be permitted.

10.5. Multiple Hail-outs

A vessel may hail out for one directed commercial groundfish fishery only, except when hailing out for both Halibut and Sablefish fishing.

10.6. At-Sea Monitoring

Timely and accurate information on harvesting practices and the catch composition and location is essential to assess the status of fish stocks, ensure the conservation and long-term sustainability of fish resources, and assess the impact of the fisheries on other species of interest (e.g., sharks, marine mammals, seabirds). Effective monitoring and accurate catch reporting are integral to resource management, enforcement of fisheries rules and the development of effective management plans. Monitoring of all catch, both landed and at-sea releases is critical to sustainable fisheries management. At-sea monitoring encourages responsible fishing and provides information supportive of Canada's international obligations for fisheries.

Complete 100 percent monitoring on all commercial groundfish fishing trips is required to monitor at-sea releases and record fishing activity, location, date and time.

Trawl monitoring requirements can be found in the Groundfish Trawl Commercial Harvest Plan Appendix 8. Monitoring requirements for all groundfish hook and line/trap fisheries can be found in Appendix 2.

10.7. In-Season Updates

Important changes are made to the IFMP throughout the season. For announcements of in-season updates to the IFMP, please refer to:

- Pacific Region Management Plan website at:
<http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/MPLANS/MPlans.htm#Groundfish>
- Fishery Notice website at:
<http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm>

In-season sector catch and sector cap summaries are updated daily and may be found at:
<http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.htm>

The following revisions to the IFMP have occurred to date:

Version	Date of Issue	Summary of Changes
1.0	21-Feb-2016	Initial IFMP issued.
1.1	23-Mar-2016	<ul style="list-style-type: none"> • Updated measuring grid recommendations in section 3.6 of

		<p>appendix 2.</p> <ul style="list-style-type: none"> • Decreased Yelloweye Rockfish quota limits in appendices 3, 5, 6, and 7. Decreased Yelloweye Rockfish limits sections 9.1.5.6 and 9.1.5.7 • Updated advisory board contact information in appendix 11.
1.2	28-Jul-2016	<ul style="list-style-type: none"> • Increased Big Skate quota limit in appendix 6. • Increased rockfish limits in appendix 4.
1.3	13-Sep-2016	<ul style="list-style-type: none"> • Increased Quillback Rockfish, and Copper, China, and Tiger Rockfish quota limits in appendix 6, section 6.3.1.

11. SHARED STEWARDSHIP ARRANGEMENTS

11.1. Commercial Industry

Several Joint Project Agreements (JPA) currently exist between Fisheries and Oceans Canada and Wild Canadian Sablefish Ltd., the Canadian Groundfish Research and Conservation Society, and the Pacific Halibut Management Association. JPAs are also being considered for 2016-17 between Fisheries and Oceans Canada and several partners to support groundfish science activities through the allocation of fish to finance the activities, consistent with the authority granted to the Minister in Fisheries Act amendments described earlier in section 1.5.

11.2. Fisheries and Oceans Canada

The groundfish fisheries in British Columbia are managed through the Groundfish Management Unit. This includes six Fisheries Management personnel directly involved in the management of this fishery. In addition, a groundfish stock assessment unit, located at the Pacific Biological Station contributes to annual stock assessments for groundfish species. Contributions to the IFMP are provided by Fisheries Management, the Science Branch, Conservation and Protection, the Pacific Fishery Licence Unit, the Treaty and Aboriginal Policy Directorate, the Oceans program, the Species At Risk program, and numerous others. A list of DFO contacts is provided in Appendix 1.

12. COMPLIANCE PLAN

12.1. Overview

The Conservation and Protection (C&P) program, part of the Ecosystems and Fisheries Management Sector, has a large role in facilitating compliance with the acts and regulations associated with Canada’s aquatic resources. Through modern community policing practices, C&P uses education, partnering, enforcement and problem solving to assist in the conservation and protection of the fishery resources.

There are approximately 155 fishery officers stationed in the Pacific Region, which encompasses the province of British Columbia and Yukon Territory. They are designated as “fishery officers” under Section 5 of the *Fisheries Act* and have full enforcement powers and responsibilities outlined in the *Fisheries Act*, *Coastal Fisheries*

Protection Act, Oceans Act, Species at Risk Act, the Criminal Code of Canada and the Constitution Act.

Observers perform duties best described as “Observe, Record and Report.” Duties are related to monitoring of fishing activities, examination and measurement of fishing gear, collection of biological samples, recording scientific data, monitoring the landing of fish and verification of the weight and species of fish caught and retained. Observers, while performing a vital role contributing to regulatory compliance, are not enforcement officers. Observers must carry proof of their designation by DFO as an Observer (laminated card).

Dockside Observers monitor and document weigh-out inspections at all approved landing locations. Observers interview the fisher, assigning catch to the appropriate stock area, spot-check harvest logs for consistency with verbal reports and notify the Department of any occurrences observed during the interview, logbook review and offload process.

Fishery officers are tasked with the responsibility of responding coast-wide to calls from the general public, other agencies, observers and other industry users reporting all types of occurrences including commercial groundfish landings. Fishery officers inspect and investigate groundfish vessels for compliance with terms and Conditions of Licences, *Fisheries Act* and related Regulations and Variation Orders.

12.2. Enforcement Issues

Observers perform a key role in observing, documenting and reporting to DFO fishing related occurrences. Occurrence reporting procedures are reviewed with the objective of ensuring that fishery officers coast-wide are able to provide prompt response to significant enforcement issues.

Fishery officers conduct inspections both dockside and at sea to verify compliance with Licence Conditions. Due to the complexity of transferable Individual Transferable Quota (ITQ) and the related licence amendment system, tracking of catch quantities under the ITQ system is primarily performed administratively under the dockside monitoring program.

12.3. Current Priorities

Fishery officers will:

- investigate all incidents of Closed Area fishing such as RCAs, sponge reef protection areas, and other Closed Areas;
- continue to enforce compliance with hail-out, hail-in and other elements of the DMP and at-sea observer program;
- conduct investigations and enforcement actions in response to the retention of groundfish caught, retained or possessed without licence authority. Priority will be placed on occurrences where retention for the purpose of sale is indicated;
- investigate incidents of unauthorized dual fishing; and
- take greater concern for compliance with Electronic Monitoring (EM)

Licence Conditions, especially Time Gaps that are reported.

12.4. Fishery Patrol Vessels

All at-sea patrols will be conducted using a combination of small craft (program vessels, mostly 7.33 metre and 9.2 metre rigid hull inflatable boats) and Canadian Coast Guard (CCG) vessels. CCG vessels are staffed and operated by CCG staff, and marine enforcement officers. Fishery Officers may be deployed onboard CCG vessels throughout the year to patrol specific fisheries.

12.5. Air Surveillance

Patrol coverage using chartered aircraft with a fishery officer onboard, is utilised to identify concentrations and distribution of fishing vessels. Aerial surveillance resources are utilized throughout the year to ensure compliance with the Fisheries Act, Regulations and Licence Conditions. Flight reports, photographs and other data collected from the surveillance flights are readily available to departmental managers and fishery officers through an Internet-based flight information system.

13. APPENDICES

Appendix 1: DFO Contact Information

Appendix 2: Groundfish Hook and Line/Trap Monitoring Requirements (At-Sea and Dockside), Mortality Rates, and Size Limits

Appendix 3: Schedule II – Other Groundfish Species Commercial Harvest Plan

Appendix 4: Rockfish by Hook and Line (Inside ZN) Commercial Harvest Plan

Appendix 5: Rockfish by Hook and Line (Outside ZN) Commercial Harvest Plan

Appendix 6: Halibut Commercial Harvest Plan

Appendix 7: Sablefish Commercial Harvest Plan

Appendix 8: Groundfish Trawl Commercial Harvest Plan

Appendix 9: Rebuilding plans

Appendix 10: Vessel Safety

Appendix 11: Commercial Groundfish Advisory Committee Contacts

Appendix 12: Fishing Hazards Advisory

14. GLOSSARY

Accountability	All harvesters are required to account for or accurately record all catch, both retained and released, for all species when fishing. As such, all catch becomes “accounted” for. Verification of accountability occurs through the monitoring program.
Area/Subarea	As in Section 2 of the <i>Pacific Fishery Management Area Regulations</i> , available through the Internet at: www.dfo-mpo.gc.ca/communic/policy/dnload_e.htm .
CIC	Commercial Industry Caucus: A committee consisting of commercial groundfish vessel representatives and processors.
Communal Commercial Licence	Issued to First Nations organizations pursuant to the <i>Aboriginal Communal Fishing Licences Regulations</i> for participation in the general commercial fishery.
Communal Licence	Issued to First Nations organizations pursuant to the <i>Aboriginal Communal Fishing Licences Regulations</i> , to conduct fishing and related activities.
COSEWIC	Committee on the Status of Endangered Wildlife in Canada.
CSAP	Centre for Scientific Advice Pacific
CSAS	Canadian Science Advisory Secretariat
C&P	Conservation and Protection Branch

DMP	Dockside Monitoring Program: Program conducted by a company that has been designated by the Department, which verifies the species composition and landed weight of all fish landed from a commercial fishing vessel.
FSC	A fishery conducted by First Nations for food, social and ceremonial purposes.
GIAB	Groundfish Integrated Advisory Board: a committee consisting of representatives from First Nations, commercial groundfish fisheries and unions, recreational fisheries, coastal communities, the province of British Columbia, and environmental non-governmental organizations.
ITQ	Individual Transferable Quotas. The subdivision of a TAC into tradable shares to each commercial groundfish licence holder at the beginning of each season that are transferable between commercial groundfish licences (also referred to as Individual Vessel Quotas)
Observer	An individual who has been designated as an observer by the Regional Director General for Pacific Region pursuant to Section 39 of the <i>Fishery (General) Regulations</i> .
RCA	Rockfish Conservation Area. An area that is closed for the protection of various inshore rockfish species to fishing activities that negatively impact rockfish.
Responsibility	For those species that have a TAC and ITQ, harvesters must acquire sufficient quota to cover the mortality of retained and released species.
SAR	Science Advisory Report
SARA	<i>Species At Risk Act</i>
SFAB	Sport Fishing Advisory Board
SSRPs	Science Special Response Processes
TAC	Total allowable catch: The amount of catch that may be taken annually from a stock.
Tonne	Metric tonne, 1000 kg, or 2204.6 lbs.
Validation	The verification, by an observer, of the weight of fish landed.

Appendix 1: DFO Contact Information

Observe, Record and Report

1-800-465-4336

Help to protect our Fisheries Resource

Groundfish Activity Lines/In-Season Updates

Halibut

604-666-2993

Regional Headquarters

Regional Resource Manager, Groundfish

Neil Davis

604-666-9033

Trawl Co-ordinator

Barry Ackerman

604-666-3991

Halibut/Sablefish Co-ordinator

Adam Keizer

604 666-0912

Hook and Line Co-ordinator

Rob Tadey

604-666-3279

Trawl Quota Officer

Gerry Dunsmore

604-666-0010

Hook and Line Quota Officer

Louise Yada

604-666-5865

Facsimile

604-666-8525

Groundfish Stock Assessment

Regional Groundfish Section Head

Greg Workman

250-756-7113

Elasmobranchs

Jackie King

250-756-7176

Inshore Rockfish

Lynne Yamanaka

250-756-7211

Slope Rockfish

Andrew Edwards

250-756-7146

Pacific Cod

Robyn Forrest

250-756-7205

Sablefish

Rob Kronlund

250-756-7108

Flatfish/Lingcod

Kendra Holt

250-756-7165

250-363-8835

Pacific Hake/ Port Sampling

Chris Grandin

250-756-7170

Observer Programs

Greg Workman

250-756-7113

Enforcement

Groundfish Enforcement Co-ordinator

604-666-0228

Detachment Supervisor, Prince Rupert

250-627-3430

Detachment Supervisor, Queen Charlotte City

250-559-8580

Detachment Supervisor, Bella Coola/Bella Bella

250-799-5698

Detachment Supervisor, Campbell River/Port Hardy

250-850-5707

Detachment Supervisor, Port Alberni/West Coast

250-720-4450

Detachment Supervisor, Victoria

250-363-3252

Detachment Supervisor, Nanaimo

250-754-0221

Detachment Supervisor, Steveston

604-664-9308

Recreational Fisheries

Recreational Fisheries Co-ordinator	Devona Adams	604-666-3271
North Coast Resource Manager	John Webb	250-627-3409
Central Coast Resource Manager	Kristen Wong	250-799-5620
South Coast Resource Manager	Brad Beath	250-756-7190
Lower Fraser River Resource Manager	Brian Matts	604-666-2096

Treaty and Aboriginal Policy Directorate

Director, Treaty and Aboriginal Policy Directorate	Sarah Murdoch	604-666-7478
Manager, Aboriginal Fisheries Strategy	Ann Susnik	604-666-8385

First Nations Fisheries

North Coast Resource Manager (Areas 1 - 2)	Victor Fradette	250-559-4467
North Coast AFS Implementation Officer (Areas 3 - 6)	Karen Kimura-Miller	250 627-3020
Central Coast Resource Manager (Areas 7-10)	Kristen Wong	250-799-5620
South Coast Resource Manager (Areas 11-13 & 27)	Kevin Conley	250-756-7196
South Coast Resource Manager (WCVI)	Paul Preston	250-720-4452
South Coast AFS Implementation Officer (SOG)	Jonathan Joe	250 746-5701
Lower Fraser River Resource Manager	Brian Matts	604-666-2096

Regional Data Unit

604-666-2716

Licensing

Pacific Fishery Licence Unit Suite 200-401 Burrard Street Vancouver, B.C. V6C 3S4	Facsimile	604-666-0566 604-666-5855
Pacific Fishery Licence Unit 417-2nd Avenue West Prince Rupert, B.C. V8J 1G8	Facsimile	250-627-3413 250-627-3496
Pacific Fishery Licence Unit 60 Front Street Nanaimo, B.C. V9R 5H7	Facsimile	250-754-0400 250-754-0403

**Appendix 2: Groundfish Hook and Line/Trap Monitoring Requirements (At-Sea and Dockside),
Mortality Rates, and Size Limits**

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1. CATCH MONITORING

Information on all catch is necessary for the proper management of the fishery. Monitoring of all catch, both landed and at-sea releases is critical to sustainable fisheries management. Mandatory 100 percent monitoring on all commercial groundfish hook and line and trap fishing trips will be required to provide a full and reliable accounting of all catches in these fisheries, both retained and released, and record fishing activity, location, date and time. This requirement may be met either through at-sea observer coverage or through the use of an Electronic Monitoring (EM) system on each trip. In addition, all landings must be validated through a dockside monitoring program.

2. AT SEA OBSERVER COVERAGE

Under Section 46 of the *Fishery (General) Regulations*, the licence holder or master of a fishing vessel shall, at the request of the Regional Director General, permit an observer to go on board that vessel to perform the designated duties for the period of time specified and arrange for embarkation or disembarkation of the observer at the times and places specified. The vessel master shall provide all reasonable assistance to the observer.

Archipelago Marine Research Ltd. (AMR) is the designated service provider for at-sea observers for the groundfish fisheries. Contact AMR at 1-800-663-7152 to arrange for at-sea observer services or to inquire about costs of this service. Other vessel requirements are outlined in AMR's services agreement that each vessel must complete before an observer is deployed.

3. ELECTRONIC MONITORING SYSTEM

The EM system allows for auditing, on a trip and set basis, the species caught, retained and released at sea. Using an EM system is an alternative to the requirement to carry an at-sea observer. Vessels that do not ensure that the EM system is functional for the entire trip, that the cameras have a clear view of the fishing area at all times, or that release rockfish at-sea, may be required on subsequent trips to carry an at-sea observer.

It is the responsibility of vessel owners / licence holders to arrange for fishery electronic monitoring services from a service provider approved by the Department. Archipelago Marine Research Ltd. (AMR) is the EM service provider currently approved by the Department.

3.1. Organizational Requirements

Vessel masters must arrange for service providers that meet the following organizational requirements.

Business Plan

Vessel masters must arrange for potential service providers to provide the Department a business plan that includes a description of the organization of the service provider company, its human resources, and its plan of operations, including but not necessarily restricted to:

1. Incorporation papers;
2. Evidence of the company's financial viability, through:
 - a) provision of the organization's financial statements; or
 - b) provision of a performance bond guaranteeing three months operation;
3. A company organization chart listing principals, officers, and employees including job descriptions and responsibilities;
4. An operational plan setting out operational procedures and equipment requirements that demonstrate the capacity to operate EM services on a continuous basis;
5. A human resources plan that demonstrates the capacity and expertise to provide EM services, that:
 - a) demonstrates capacity and expertise to manage technical projects or programs;
 - b) demonstrates capacity and expertise to manage a project which has a training component;
 - c) identifies individuals responsible for training and demonstrate that they have capacity and expertise to deliver training programs to adults.
6. A data quality system that ensures the integrity of the information collected and compiled, which includes:
 - a) a person responsible for the system and his or her duties;
 - b) the operating system and the manner in which the records are kept;
 - c) the control points, the verification procedures, and the process for correcting deficiencies in the system;
 - d) a system for maintaining a record of system failures that details the event and corrective actions taken.
7. A detailed training plan that will be delivered by the company or an independent training organization and a process for amending the plan when changes to legislation, regulation, or policy dictate new program requirements.

Insurance

The service provider must have Commercial General Liability insurance maintained in force throughout the duration of the period for which they are approved as an EM service provider, in an amount for a limit of liability not less than \$5,000,000 per accident or occurrence.

The service provider must maintain the required insurance coverage for the duration of the period for which they are an approved service provider. Compliance with the insurance requirements does not release the company from or reduce its liability as an approved service provider.

The service provider is responsible for deciding if additional insurance coverage is necessary to ensure compliance with any applicable law. Any additional insurance coverage is at the service provider's expense, and for its own benefit and protection.

The service provider must provide to DFO a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. Coverage must be placed with an Insurer licensed to carry out business in Canada. The service provider must, if requested by DFO, provide a certified true copy of all applicable insurance policies.

Security and technical capacity

Some of the data collected by EM systems and processed by service providers is Protected information. Each of the company's proposed individuals requiring access to Protected information, assets or work site(s) must meet the security requirement at the requisite level of Reliability Status, granted or approved by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).

The company must provide the name of all individuals who will require access to Protected information, assets, or sensitive work sites.

To submit catch data to DFO via its Fisheries Operations System, the service provider must have internet access and security clearance to acquire user access to the Fisheries Operations System web services. The service provider must also acquire Secure Virtual Personal Network access (provided by DFO) which includes: (1) Public key infrastructure (PKI) credentials and client software, (2) SVPN client software, and (3) Citrix software or software compatible to client Microsoft Terminal Server. This enables submission of information technology bugs and issues via DFO software. DFO will work with approved service providers to support the connection of service providers to the Fisheries Operations System.

Upon receipt by DFO of the harvest data and fishing location information included in EM data, Section 20(1)(b) of the *Access to Information Act* prevents DFO from disclosing to a third party, records containing financial, commercial, scientific or technical information that is confidential information. Further, Section 20(1)(c) of the *Act* prevents DFO from giving out information, the disclosure of which could reasonably be expected to prejudice the competitive position of the licence holder. Given this, service providers must demonstrate they have data management and security systems capable of preserving the integrity, accuracy, and confidentiality of EM data. Protection measures, including but not necessarily limited to SSL encryption, must be in place for EM data transmitted by service providers to DFO.

Service providers must demonstrate how EM systems are both tamper resistant and capable of indicating when attempted tampering has occurred.

Arm's Length

Arm's length criteria ensure that there are no actual or perceived conflicts of interest between EM service providers and fishing enterprises. Upon approval, service providers must attest that:

- a) The service provider, its subcontractors or agents and their respective personnel assigned to or engaged for the performance of the work have not accepted and shall not accept any bribe, gift, benefit, or other inducement that would, in any way, cause a real or apparent conflict of interest;
- b) The service provider, its subcontractors or agents and their respective personnel assigned to or engaged for the performance of the work shall have no activities or relationships with any third parties, including fishing vessels owners and operators, that would render it or any of them unable to provide impartial information, assistance or advice to DFO, or affect or otherwise impair its or their objectivity in performing the work.

Should the service provider become aware of any such activity or relationship, bribe, gift, benefit, or other inducement, the service provider must undertake to immediately report the matter, in writing, to DFO.

Upon learning of any potential conflict of interest on the part of the service provider or any of its subcontractors or agents and their respective personnel assigned to or engaged for the performance of the work, DFO may direct the service provider, in writing, to take whatever steps that DFO, in its sole discretion, deems necessary and appropriate to resolve the potential conflict.

Companies must provide a notarized declaration that the company and its directors, principals, officers, shareholders, and employees, and those with any other financial interest in the company have no actual or perceived conflicts of interest with the fishing industry, and meet the arm's length criteria as described here, and explains how any such conflicts will be resolved.

3.2. Systems Requirements

Any electronic monitoring system must be approved by the Department and must include the following minimum specifications and component requirements:

- a) a video and sensor data-logging engine (control box), equipped with monitor and keyboard to verify correct power supply and EM system software and hardware performance, equipped with an external control to allow the user to manually insert time-stamped event markers into the sensor record;
- b) operating software to record imagery during fishing events;
- c) peripheral sensor devices suitable for fishing-deck work environment, including GPS, an electronic hydraulic pressure transducer, and a winch rotation sensor (where applicable);
- d) a minimum of two closed circuit television cameras, suitable for fishing-deck work environment, configured with an adjustable focal length lens to provide a clear view of the catch retrieval process and the measurement of released fish.

- e) have the sensor box connected to a monitor and keyboard to allow the user to view recorded EM imagery and conduct system checks to test system functionality.

Video images captured by the EM system shall meet the following minimum specifications:

- a) image files shall be viewable on Windows media player; if a non-standard Windows media player Codec is used, it shall be provided to Archipelago Marine Research Ltd. for image analysis;
- b) minimum resolution of 640 X 480 dpi and the ability to vary lens choice to ensure an appropriate field of view;
- c) imagery must have a burned-in caption showing vessel identifier, date, time and location;
- d) image files must capture 100% of each catch retrieval event, including a 10 to 30 minute run-on (depending on gear type) after each event;
- e) image frame rates shall be not less than 5 frames per second for catch retrieval imagery; and
- f) image quality must be sufficient to allow clear identification of species.

Sensor data captured by the EM system shall meet the following minimum specifications:

- a) Sensor data should be recorded to an ASCII file at a minimum frequency of once every 10 seconds;
- b) Sensor data format must meet the specifications outlined below:

Date,Time,UTCOffset,Lat,Latmin,Lon,Lonmin,Gpsok,Speed,Heading,Voltage,Saterr,
Video,Event,Drum,Pressure

080602,120041,-07.00,48,26.1305,123,23.7711,1,00.0,277,11.97,005,0,01,0,0

080602,120051,-07.00,48,26.1305,123,23.7711,1,00.0,257,11.95,005,0,00,0,0

080602,120101,-07.00,48,26.1305,123,23.7711,1,00.0,249,11.95,005,0,00,0,0

080602,120111,-07.00,48,26.1305,123,23.7711,1,00.0,252,11.95,005,0,00,0,0

Comma Delimited Data Format

The date, time, latitude, longitude, speed, heading and satellite error are all delivered by the GPS in National Marine Electronics Association (NMEA) 0183 Version 2.0 format. All data are numeric except the comma separators. Sensor sample interval is 10 seconds.

- 1) **DATE** – fixed width, 6 characters, YYMMDD
- 2) **TIME** – fixed width, 6 characters, HHMMDD, Pacific Standard Time year round.
- 3) **LAT** – Latitude degrees, fixed width, 2 characters
- 4) **LATMIN** – Latitude minutes, fixed width 6 characters including decimal point with 3 decimal characters
- 5) **LON** – Longitude degrees, fixed with 3 characters

- 6) **LONMIN** – Longitude minutes, fixed width 6 characters including decimal point with 3 decimal characters
- 7) **SPD** – Speed knots, fixed width 4 characters including decimal point with 1 decimal character
- 8) **HDG** – Heading degrees, fixed width 3 characters
- 9) **SATERR** – Estimated horizontal position error in metres (radius), fixed width, 3 characters. The horizontal position error (HPE) is delivered in the NMEA 0183 – GPS data stream
- 10) **VIDEO** – Video on/off, fixed width, single character (0 or 1)
- 11) **EVENT** – Operator initiated event marker, fixed width, 1 character (0 or 1)
- 12) **COUNT** – Rotation sensor – drum revolutions during sample interval, column width variable
- 13) **PRES** – Hydraulic pressure reading, pounds per square inch (PSI), column width variable.

3.3. Administrative and reporting requirements

Vessel masters must arrange for service providers that can meet the following minimum administrative and reporting requirements:

- a) data collected from the fishing logs shall be entered into DFO's Fisheries Operations System (FOS) within seven (7) days of collection;
- b) imagery viewing shall be completed to conduct audits of fishing logs (see section 12 below);
- c) results of the audit shall be used to produce a quota status report using FOS within five (5) days of the availability of a logbook and validation record in the FOS system (unless an audit has failed);
- d) where an audit has failed, results of the audit shall be used to produce a written report to DFO within five (5) days of the availability of a logbook and validation record in the FOS system;
- e) electronic records of all audits performed shall be maintained;
- f) video and sensor data shall be retained by the service provider responsible for conducting the audit:
 - a. for at least 14 days after data has been reviewed to support audits of fishing logs and until a quota status report has been issued, where data review has not generated an occurrence report or audit failure, or
 - b. for at least 30 days after data has been reviewed to support audits of fishing logs and until a quota status report has been issued or until DFO provides written indication that these data can be destroyed, where data review has generated an occurrence report or audit failure. The service provider will provide DFO 7 days advance notice before the 30 day period is up to allow DFO the opportunity to request the video and sensor data from the service provider for storage in DFO facilities or to provide permission to destroy the data;
- g) video and sensor data shall be provided to DFO upon DFO's request;

- h) audit reports shall be produced that are consistent with requirements set out in section 12 of this appendix, and any further guidance developed by the Commercial Industry Caucus (CIC) EM subcommittee;
- i) occurrence reports shall be produced for breaches of licence conditions within five (5) days of the availability of video and sensor data, a logbook, and validation record in the FOS system, consistent with requirements set out by the DFO Conservation and Protection branch;
- j) monthly reports shall be submitted to DFO using specified templates developed by DFO that include the audit results by fishery, number of vessels, number of trips, landed weight, audit reports, the total hours of EM services, and the total hours of data services provided;
- k) a year-end report shall be submitted to the CIC EM subcommittee summarizing fleet participation and performance, lessons learned, equipment performance, and any further content identified by the CIC EM subcommittee;
- l) meetings of the CIC EM subcommittee shall be attended regularly throughout each year.

3.4. Requirements prior to fishing when using EM:

The vessel master must make arrangements with an approved EM system service provider to install an EM system on board their vessel. The EM system must be functioning prior to hailing out. A functionality test confirming that the EM system is working must be completed by either the EM service provider or through the use of the User Enabled Services (UES) program. The FTCN must be recorded in the fishing log and is required to hail out.

- a) When hailing out, the vessel owner or master must provide the hail service provider with, in addition to the usual trip details, either an FTCN or the name and observer ID number of the embarking at sea groundfish observer for the trip.
- b) A hail out number will only be issued if either the FTCN (confirming a fully operational EM System) or the name of an embarking at sea observer is included in the hail information. The vessel must not depart port until a hail out number has been issued.
- c) A Quota Status Verification Number (QSVN) must also be provided at the time of hail, this number is to be recorded on the validation record at offload.
- d) Vessels must hail out to the designated hail service provider and must receive a hail out number prior to departing on the trip. The hail out number must be recorded in the fishing log. Hail out requirements are fully described in licence conditions.
- e) Archipelago Marine Research Ltd. (AMR), the EM service provider currently approved by the Department, also provides the UES program, a voluntary program that enables a skipper to manage aspects of the EM program that would traditionally be performed by an EM technician. For more information on eligibility and program guidelines, contact AMR.

3.5. Requirements while fishing with EM:

- a) Accurate recording of all fish caught and released in the fishing log is key to both accurate determination of catch and cost-effective fishing log audits. All halibut and sablefish caught and either retained or released must be accurately recorded by piece

count and estimated weight in the fishing log. All other species must be accurately and fully recorded as piece counts. In addition, the set and haul details including fishing time and location must be accurately recorded.

- b) Where an EM system is in use on a vessel, the vessel master shall ensure all components of the system are fully operational during the entire fishing trip from the time the vessel leaves port until the vessel arrives at port to offload and the technician removes the trip information. The EM system shall be continuously powered and not turned off at any time. Vessels masters may also conduct periodic system functionality checks via monitor and keyboard. These checks record EM system performance and have it recorded with a time and date stamp on the system hard drive.
- c) If any or all of the EM system equipment becomes inoperative or malfunctions in any way, the vessel master shall immediately contact the EM system service provider. If the EM system cannot be repaired at sea, the vessel master shall stop fishing by hauling gear and returning to port as soon as possible. Trip data will be reviewed to ensure no fishing occurred after equipment failure. For Sablefish trap vessels, traps can be left in the water (for no more than four days) if the vessel is returning to port to repair the equipment and subsequently returning to the fishing grounds to complete the trip. If the EM system cannot be repaired at port, the vessel must hail-in as soon as possible.
- d) All rockfish species must be retained and landed. See appendices 4 and 5 for further details.
- e) EM system camera views must capture all fishing gear as it is retrieved from the water and all retained and released fish.
- f) Vessel operators and crew should avoid positioning themselves between the camera and the catch as this hampers accurate recording of catch during image review. All catch must be visible to the camera.

3.6. Measurement grid

- a) The use of a measurement grid is optional, however if the vessel master opts not to use a grid then all releases of lingcod, sablefish and halibut will be deemed legal size and all releases of dogfish will be deemed marketable and the appropriate mortality rates will be applied (see Section 7). The vessel master will then be responsible to acquire the necessary quota to address these.
- b) If a measurement grid is used then all sub-legal lingcod, sablefish, halibut and unmarketable dogfish must be held against the grid matching the specifications outlined below in (d). Vessel masters are reminded that fish are to be held against the measurement grid for at least three seconds before release without doing other activities (i.e. removing a hook). The calmer the fish, the easier they are to measure. The objective is to allow video viewers to visually gage the length of the fish. If the grid is used improperly, the fish cannot be measured and the released fish will be deemed legal size.
- c) The exceptions to this are released halibut on a directed halibut trip, released dogfish on a directed dogfish trip, and released lingcod on a directed lingcod trip. On these trips all targeted species that are released at-sea will be assumed to be sub-legal or unmarketable and do not have to be measured. All levels of releases will be monitored in season to assess this requirement. See size limits in Section 9.

d) Recommended measurement grid specifications:

1. For vessels that choose to discard fish at the rail (Figure 1), or after the fish have come over the rail (Figure 2), measurement stations at the hauling area should have the following delineations:
 - i. Control Level
 - Green band above the bumper that has a height of 5cm and a width of 100cm
 - ii. Bumper
 - Raised material (e.g. existing rail or rubber or angle iron) at bottom of control level, it must be sufficient to act as a control point to hold the tip of the fish against
 - iii. Measurement Bands
 - Red band spanning 55-60cm from the bumper
 - White band spanning 60-65cm from the bumper
 - Yellow band spanning 65-75cm from the bumper
 - White band spanning 75-81cm from the bumper
 - Light green band spanning 81-91cm from the bumper
 - White band spanning 91-97cm from the bumper

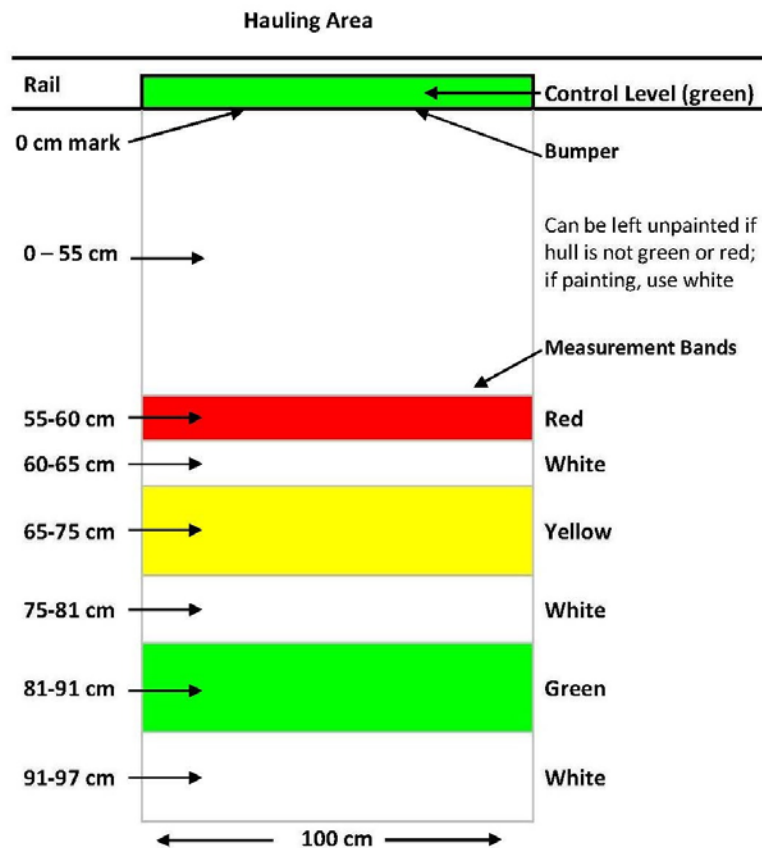


Figure 1. Measurement grid recommendations for vessels releasing at the rail.

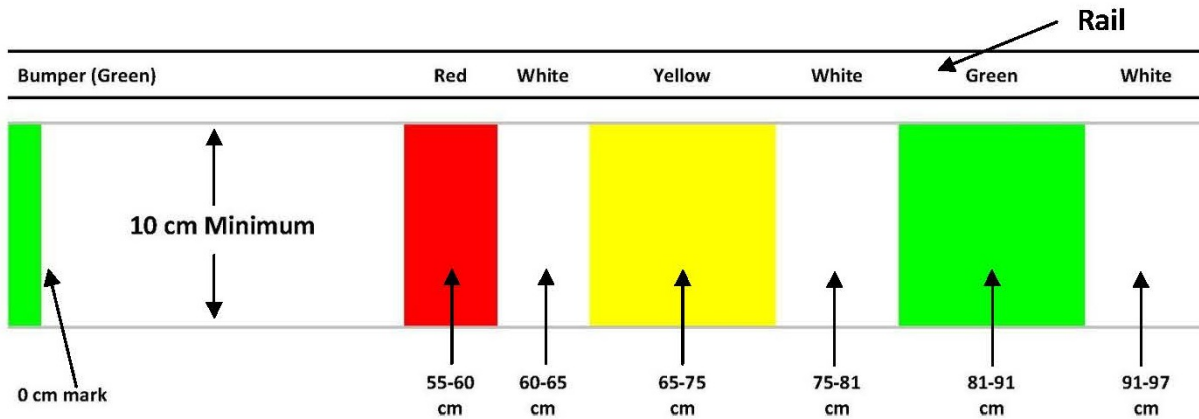


Figure 2. Measurement grid recommendations for vessels releasing after fish have come over the rail.

2. If a vessel does not have adequate freeboard for the bands on the side, infrastructure can be added above the rail at the hauling area (Figure 3). The control level, bumper and any bands above the hull must be a minimum of 10 cm wide; any bands on the hull must meet the specifications stated above.

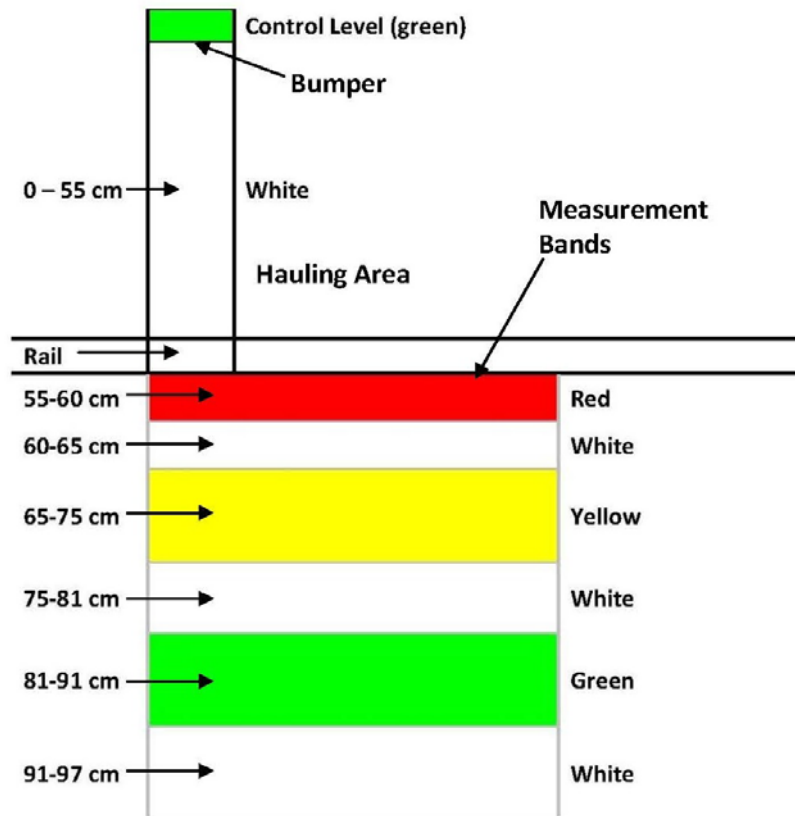


Figure 3. Measurement grid with infrastructure added for vessels without adequate freeboard.

3.7. Evaluation

The performance of the service provider(s) in meeting the requirements of the EM program may be evaluated. Service providers failing to meet the minimum requirements outlined in this appendix may not be approved by DFO to perform those duties in subsequent years. Further, the EM requirements set out in this appendix will be subject to periodic review.

DFO is not responsible for third-party contracts or other arrangements between licence holders and service providers. It is the responsibility of licence holders to ensure that arrangements are in place for service providers to meet EM requirements.

As part of the evaluation process, DFO may assess performance against the requirements described in this document at various points within the fishing season. Feedback will be provided to the service provider(s) and licence holder representative(s). Any opportunities to improve performance will be documented during the first 8 months of the year. In the event that service providers are unable to reach a satisfactory level of performance in the EM program, they will be notified along with licence holder representative(s), prior to November 1 of each year that DFO will not approve their company to provide EM services in the following year.

EM service provision evaluation criteria:

- Success of EM data collection,
- Processing and delivery of logbook information within the specified timeframes;
- Documentation of equipment deficiencies /failures and repair;
- Rate of equipment deficiencies /failures and timeliness of equipment repair;
- Timeliness, completeness, and accuracy of trip audit reports, occurrence reports, quota status reports, monthly reports, and year-end report;
- Preservation of accuracy, integrity, and confidentiality of EM data;
- Adherence to arm's length and insurance criteria;
- Attendance at meetings of the CIC EM subcommittee.

4. INTEGRATED GROUND FISH FISHING LOG

An Integrated Groundfish Fishing Log (“fishing log”) will be available from Archipelago Marine Research Ltd. It is the responsibility of the vessel owner or master to ensure that the Integrated Groundfish Fishing Log be completed fully and accurately. The fishing log shall be updated prior to the landing or sale of groundfish taken during that fishing trip (see section 16 for examples).

The white copy of the completed pages of the fishing log will be collected by the groundfish dockside observer. When halibut has been landed, the yellow copy of the completed pages from the fishing log should remain in the logbook until removed by IPHC personnel or mailed within seven days of the vessel's last trip to:

International Pacific Halibut Commission
2320 West Commodore Way, Suite 300
Seattle, WA, United States
98199-1287

5. HAIL PROGRAM

Prior to leaving port for a fishing trip, and prior to landing catch, the vessel masters must indentify their intentions by way of hailing. Hail-out and hail-in reports may be made either via telephone, or electronically via the e-hail program, as described in the conditions of licence.

To hail via telephone, a vessel master shall contact the designated groundfish hail service provider, Archipelago Marine Research Ltd. (AMR), at 1-877-819-1888 (24 hours per day; seven days per week).

5.1. E-hail System Requirements

Any vessel using the electronic hail program must meet the following minimum specifications and component requirements:

- a) a personal computer with Windows XP or a later version of Windows operating system installed with the ability to send and receive e-mail; and
- b) e-mail sending and receiving capability via any of the following methods:
 - (i) “Skymate” satellite communications equipment and account; or
 - (ii) “Boatracs” satellite communications equipment and account; or
 - (iii) any dial-up or broadband (cellular, satellite, or land-based phone) connection; and
 - (iv) at least 100 megabytes of hard drive space available for the installation and operation of the electronic hail software.

6. BAIT

Commercial fishers wishing to use licensed catch as bait may do so (with the exception of rockfish). All such catch must be accurately recorded in the Integrated Groundfish Fishing Log. Rockfish may not be used as bait but must be retained and landed. Pacific cod landings are subject to a trip limit, (refer to licence conditions for details), however, any amount of Pacific cod caught can be used for bait provided that the fish is recorded in the logbook.

Octopus caught incidentally may be retained and used for bait but cannot be landed and sold.

If a quota species is used as bait, the vessel will be assessed the average weight for that species (see Section 9).

7. DOCKSIDE MONITORING AND VALIDATION

7.1. Hail-in

Vessels must hail-in to the designated hail service provider prior to the landing of any fish. The landing of any species of fish can not commence unless a groundfish dockside observer is present and has given permission to commence the landing. All requests for dockside observer services will be handled as quickly as possible; however vessel masters are urged to provide as much

advance notice as practical (e.g., 24 hours) to avoid delays. Response times will vary depending on many circumstances such as observer availability, time of hail and location of offload. Hail-in requirements are fully described in licence conditions.

7.2. Designated Landing Locations

All hook and line and trap groundfish species shall be landed only at the approved landing ports listed in the licence conditions. To get an estimate of costs and rates for different landing locations, contact AMR.

7.3. Landing

All fish landed must be separated, piece counted and weighed by individual species and by product type. The only exceptions to the piece count requirement are halibut, lingcod, dogfish and sablefish landed on directed trips.

Sub-sampling methods are set out in licence condition for species, (other than halibut and lingcod), where the landed weight is greater than 2,500 lbs.

All fish caught and retained must be landed at designated offloading locations and validated by a groundfish dockside observer using a dockside weight verification system. AMR is the designated service provider for this program, and will provide DFO designated groundfish dockside observers to verify individual vessel quota status. Specific requirements are included in conditions of licence.

The dockside monitoring program (DMP) is a cooperative process between vessel masters, processors and validators whereby all parties must work together to ensure the timely and accurate collection of catch landing data. Vessel masters are ultimately responsible to ensure the offload process meets the needs of all parties, in particular regarding piece counts. Should offload conditions (e.g. processing plant operations, lighting at the offload) inhibit the ability of the validator to conduct an accurate piece count, the observer is obliged to immediately bring this to the attention of both the plant foreman and the vessel master to have the issue resolved.

At the completion of an offload, vessel masters or a designate must review the validation record and sign off on the piece counts; acknowledging that piece counts are a key component of the audit process (Section 11). In the case where a discrepancy exists between the vessel master's count and the validation record, a recount may be requested.

Where a recount is carried out, it should be done in a way that minimizes impact and expense for the offloader. In those cases where the new counts are more than 5% out, AMR will not bill vessel for the extra time unless concerns regarding the validator's ability to carry out accurate piece counts were not addressed. If the recount of the species in question is completed and the new counts are within 5% of the original count, the costs of doing the extra time will be borne by the vessel and added to the Validation Record.

No fish may be offloaded at sea. No landing of any fish is to commence until a designated groundfish dockside observer is on-site and approves the commencement of the landing.

The observer will inspect fishholds, lazarettes, baitholds, and other areas where fish might be stored. With the exception of the directed Sablefish fishery (category K licence eligibility), after landing is completed the observer will inspect the fishholds, and the above-mentioned areas, to ensure that all fish on board have been landed. It is the responsibility of the vessel owner or master to provide safe access to the vessel's holds for inspection, and to ensure that the vessel does not leave the landing site prior to completion of the fishhold inspection by observer.

7.3.1. Partial Offloads ****Update ToC**

Vessels fishing under the authority of a category K licence eligibility are permitted to land only a portion of their catch during a “partial offload.”

A partial offload is a manner of fishing by which a vessel offloads some catch before returning to the fishing grounds for additional fishing. A maximum of two trip “legs” are permitted in a partial offload fishing trip, meaning fishing would occur in the following manner: hail out, fish, hail in, land some portion of catch, fish, hail in, land all catch, complete data processing (e.g. audit fishing log and issue Quota Status Report).

At the end of each partial offload, all logbook pages, validation records, and electronic monitoring data must be provided to the service provider. For vessels fishing with EM, a partial offload will require a hard drive exchange.

Trip limits are assessed at the end of the final hail-in, at the service provider's head office (as opposed to on the dock as occurs for traditional offloads). Trip limits are based on all catch that occurred between the hail-out and the final hail-in.

Partial offloads are prohibited for Pacific Halibut.

Once landing commences all product on-board are to be landed and weighed on a scale approved by either Industry Canada or the State of Washington Weights and Measures.

The groundfish dockside observer will verify and record in the Groundfish Validation Log the weights and, where required, the pieces of all fish landed. The observer will convert landed halibut weights to a net dressed, head-off weight. Rockfish and all other groundfish species will be converted to a round weight, using conversion factors set out in the conditions of licence.

The white copy of the completed pages from the Validation Record must remain with the groundfish dockside observer for subsequent keypunching and data entry. The yellow page must be delivered to the buyer or must accompany the load and be delivered to the buyer if the fish are trucked to the buyer.

The IPHC stock assessment is based on biological data obtained through port sampling, surveys and special projects. Since the 1930s, biologists have collected otoliths for ageing and lengths of fish. Under Section 48 of the *Fishery (General) Regulations*, the vessel master must make available for sampling any fish when requested by an authorized representative of the IPHC.

7.4. Halibut Tagging

All halibut landed in Canada including Canadian-caught halibut landed in the United States will be tagged. Under this program all halibut are tagged by the Department certified observer at the point of initial offloading with a unique serial number that will tie each fish to a particular offload. These numbers are recorded by the observer in the Validation Record completed for each landing.

The objectives of the program are twofold: to act as an enforcement tool to decrease the amount of illegally caught halibut entering the market, and to assist in marketing Canadian halibut as a distinct and high quality product.

7.5. Transport of validated fish

If the fish are to be transported to another location after landing, the vessel master should obtain a transit slip from the groundfish dockside observer, who will issue one transit slip for each vehicle or vessel transporting groundfish.

Vessels with validated fish onboard shall not engage in any commercial fishing until all validated fish have been removed from the vessel.

8. MORTALITY RATES

Vessels will be assessed mortality for legal/marketable sized fish released at-sea, for those species and areas for which a quota has been established. Mortality rates are set out below.

Gear		Lingcod	Sablefish	Dogfish	Rockfish	Halibut	Skates
Hook & Line	Jig	4%	15%	6%	100%	5%	10%
Hook & Line	Longline	4%	15%	6%	100%	16%	10%
Hook & Line	Troll	2%	15%	6%	100%	5%	10%
Trap		4%	9%	6%	100%	10%	10%

9. AVERAGE WEIGHTS

The mortality can be determined by calculating the mortality rate (as laid out above) by the predetermined average weights in pounds listed below. (For example a longline caught legal sized released halibut would be $0.16 \times 21 \text{ lb.} = 3.4 \text{ lb.}$)

Canary Rockfish	6	Quillback Rockfish	3	Shortspine Thornyhead	3
China Rockfish	3	Redbanded Rockfish	4	Silvergray Rockfish	5
Copper Rockfish	3	Rougheye Rockfish	4	Spiny Dogfish	9
Lingcod	12	Sablefish	8	Tiger Rockfish	3

Pacific Halibut	21	Shortraker Rockfish	9	Yelloweye Rockfish	7
Big Skate	18	Longnose Skate	14		

Dogfish, Sablefish and ZN vessels that encounter halibut or lingcod as non-directed catch after their season closes will be responsible for the mortality of these species.

10. SIZE LIMITS

10.1. Halibut

No person shall catch and retain a halibut that head on is less than 32 inches (81.3 cm), measured in a straight line, passing over the pectoral fin, from the tip of the lower jaw with the mouth closed to the extreme end of the middle of the tail or head off less than 24 inches (61.0 cm), measured in a straight line from the base of the pectoral fin at its most anterior point to the extreme end of the middle of the tail.

10.2. Lingcod

No person shall catch and retain a lingcod that head on is less than 65 cm in length, measured from the tip of the nose to the tip of the tail or head off is less than 50 cm in length, measured along the shortest length of the body to the tip of the tail.

10.3. Sablefish

No person shall catch and retain a sablefish that is less than 55 cm in length, measured from the tip of the nose to the fork of the tail or where the head has been removed, 39 cm in length measured from the origin of the first dorsal fin to the fork of the tail.

10.4. Dogfish-Unmarketable

Dogfish that is less than 66 cm in length, may be released at-sea, and will not be deducted from IVQ holdings.

11. RESTRICTIONS

It is unlawful to have Pacific halibut on board taken by recreational fishing if there are any other fish on board the vessel destined for commercial use.

12. FISHING LOG AUDIT

At the time of landing the video and sensor data from the EM system will be removed from the EM system by the EM system service provider. Following every trip landing there will be an audit of the accuracy of the completed fishing log completed by a service provider approved by the Department. The audit uses the video data to confirm catch by species group, DMP piece counts to confirm retained catch, and the GPS and other sensor data to confirm location of fishing. Approved service providers for the audit will run a series of tests so that the following comparisons will be made:

- a) Fishing log total retained piece counts compared to DMP validation - to verify the accuracy of logbook with respect to landed and validated catch.
- b) Fishing log piece counts compared to EM Video - to compare the observed catches and releases against the fishing log record. Ten percent (10%) of all sets per trip (minimum 1 set) will be randomly selected for video review.
- c) Fishing log set start location, time, date and total number of fishing events compared to EM sensor data – to verify the accuracy of the logbook in relation to time, date and area of catch and number of fishing events.
- d) All test results produced from the audit are combined in a weighted average to produce a trip score to provide a single value ranging from 0 ('poor') through 10 ('good') to describe general audit results.
- e) Trip scores will be considered cumulatively in determining a vessel's annual score. Annual scores, ranging in value from 0 ('poor') through 10 ('good'), are determined by averaging a vessel's trip scores accrued over the past calendar year (i.e. irrespective of season) to provide a sense of a vessel's audit history.

After the audit is complete, the logbook and the DMP together form the official trip record.

Audits that are not within acceptable range may result in the following:

- a) Letters identifying unsuccessful tests, requests for additional information to explain discrepancies, and a delay in receiving catch details;
- b) Additional time required to resolve and correct fishing trip data at additional cost to the vessel;
- c) Complete (100%) review of all EM imagery data at additional cost to the vessel; and
- d) Catch detail being based on EM data rather than logbook data.
- e) Requirement to take an at-sea observer.

13. QUOTA STATUS REPORT

Following the completion of each offload and subsequent audit, the designated EM data analysis service provider will reconcile all catch information; both landed and discarded, versus current quota holdings and produce a quota status report (QSR). The QSR will be forwarded to the identified contact for the vessel. Vessel masters should be advised that it can take up to 5-7 days for completion of a QSR.

There may be a one trip allowance for vessels to clear excess overages for non-directed catch. Vessels that remain in an overage position for any species area group will be restricted from further fishing activity for that fishery for the remainder of the fishing year, or until such time that sufficient quota holdings are reallocated to the licence to cover any overages.

14. FISHER IDENTIFICATION NUMBERS

DFO has introduced unique Fisher Identification Numbers (FIN) that will be assigned to all Pacific commercial harvesters. Once a FIN has been assigned to a fisher, that individual will reference the FIN when identifying him or herself in subsequent business dealings with both the department and service contractors, completing the FIN field on logbooks, noting the FIN when hailing and landing catch, etc. A FIN will be automatically generated for fishers when their new year's FRC licence is issued. Once the FIN is issued to a fish harvester it will not change from year to year.

15. FISH SLIPS

Vessel Masters must obtain copies of all fish slips from fish buyers and keep available copies when required by the Department. Vessel masters are required to ensure fish slip records are mailed directly to the Department no later than seven days after landing. Fish slips must be mailed to:

Fisheries and Oceans Canada
Regional Data Unit
Suite 200 - 401 Burrard Street
Vancouver, B.C. V6C 3S4

Any fishers selling fish to the public are reminded that they must obtain a Fish Vending Licence, available from any provincial government agent, and as licensed vendors they will be required to record all public fish sales on fish slips.

16. INTEGRATED GROUND FISH FISHING LOGBOOK

16.1 Example logbook page for trap gear

YEAR: 2012 INTEGRATED GROUND FISH FISHING LOGBOOK 30

Vessel: <u>GROUND FISHER</u>				FTCN: <input type="checkbox"/>				DATE: _____																																																							
VRN: <u>299999</u>				<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">GEAR ID</th> <th rowspan="2">Gear Type</th> <th rowspan="2">Length of Skate (in feet)</th> <th colspan="4">HOOK/TRAP</th> <th colspan="2">ESCAPE RING</th> </tr> <tr> <th>Type</th> <th>Size</th> <th>Spacing (feet)</th> <th># per skate</th> <th># per trap</th> <th>Diameter (inches)</th> <th>Config.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>TRAP</td> <td style="background-color: #cccccc;"></td> <td>K</td> <td>48</td> <td>150</td> <td style="background-color: #cccccc;"></td> <td>2</td> <td>3 7/8</td> <td>SS1</td> </tr> <tr> <td>B</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>C</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>D</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				GEAR ID	Gear Type	Length of Skate (in feet)	HOOK/TRAP				ESCAPE RING		Type	Size	Spacing (feet)	# per skate	# per trap	Diameter (inches)	Config.	A	TRAP		K	48	150		2	3 7/8	SS1	B										C										D									
GEAR ID	Gear Type	Length of Skate (in feet)	HOOK/TRAP								ESCAPE RING																																																				
			Type					Size	Spacing (feet)	# per skate	# per trap	Diameter (inches)	Config.																																																		
A	TRAP		K					48	150		2	3 7/8	SS1																																																		
B																																																															
C																																																															
D																																																															
Captain: <u>JOE SMITH</u>																																																															
FIN: <u>123456</u>		# of Crew: <u>4</u>		Trip #: <u>2</u>																																																											
Tab #1: <u>K99</u>		Tab #2: _____																																																													
Hail Out #(s): <u>32700332/</u>																																																															
Hail In #(s): <u>32700339/</u>																																																															
Target Species: <u>SABLE FISH</u>																																																															
Bait Spp. <u>HAKE</u>		Spp. Wt. <u>10</u>																																																													
Bait Spp. <u>SQUID</u>		Spp. Wt. _____																																																													

Set/Haul	Set #	Haul #	Set/Haul	Set #	Haul #
Gear/Skate Details	ID <u>A</u> # Set <u>55</u> # Lost <u>0</u>		Gear/Skate Details	ID <u>A</u> # Set <u>60</u> # Lost <u>0</u>	
Catch Area (GMU)	<u>5D</u>		Catch Area (GMU)	<u>5D</u>	
Set Start Date/Time	(mm/dd) <u>11/23</u> (hh:mm) <u>1100</u>		Set Start Date/Time	(mm/dd) <u>11/23</u> (hh:mm) <u>1315</u>	
Haul Start Date/Time	(mm/dd) <u>11/24</u> (hh:mm) <u>1845</u>		Haul Start Date/Time	(mm/dd) <u>11/24</u> (hh:mm) <u>2200</u>	
Haul End Date/Time	(mm/dd) _____ (hh:mm) _____		Haul End Date/Time	(mm/dd) _____ (hh:mm) _____	
Set Start Lat	<u>5413.75</u>		Set Start Lat	<u>5415.61</u>	
Set Start Long	<u>13047.82</u>		Set Start Long	<u>13101.12</u>	
Set End Lat	<u>5413.62</u>		Set End Lat	<u>5415.09</u>	
Set End Long	<u>13048.05</u>		Set End Long	<u>13103.57</u>	
Depth in fathoms	Start <u>142</u> Min <u>139</u>		Depth in fathoms	Start <u>248</u> Min <u>245</u>	
	End <u>165</u> Max <u>170</u>			End <u>262</u> Max <u>260</u>	

Species Name	Retained			Released			Species Name	Retained			Released		
	Weight	Pieces	Bait	Weight	Pieces	Liced		Weight	Pieces	Bait	Weight	Pieces	Liced
Halibut - Legal							Halibut - Legal				<u>30</u>	<u>1</u>	
Halibut - Sub-L							Halibut - Sub-L						
Sablefish - Legal	<u>1000</u>	<u>236</u>					Sablefish - Legal	<u>1150</u>	<u>268</u>				
Sablefish - Sub-L				<u>200</u>	<u>30</u>		Sablefish - Sub-L				<u>65</u>	<u>5</u>	
Lingcod - Legal							Lingcod - Legal						
Lingcod - Sub-L							Lingcod - Sub-L						
Dogfish - Mark.							Dogfish - Mark.						
Dogfish - UnMark.							Dogfish - UnMark.						
Species Name	Pieces	Bait	Pieces	Liced	Species Name	Pieces	Bait	Pieces	Liced				
Yelloweye					Yelloweye								
Quillback					Quillback								
Rougheye	<u>37</u>				Rougheye	<u>5</u>							
SS Thornyhead			<u>0</u>	<u>1</u>	SS Thornyhead								
Redbanded					Redbanded	<u>3</u>							
Big Skate					Big Skate								
Longnose Skate			<u>1</u>		Longnose Skate								
Turbot			<u>8</u>		Turbot			<u>29</u>					
Pacific Cod					Pacific Cod								

Tagged Fish/Tag #(s): A00450265 Sablefish A0040477 Sablefish

IPHC USE: _____ Collected by: _____

Comments: _____

16.2 Example logbook page for long-line gear

YEAR: **2012** INTEGRATED GROUND FISH FISHING LOGBOOK 30

Vessel: GROUND FISH #1		FTCN: <input type="text"/>		DATE: <input type="text"/>	
VRN: 12356					
Captain: ROB SMITH.					
FIN: 54321	# of Crew: 4	Trip #: 13			
Tab #1: L001	Tab #2: K09				
Hail Out #(s): 32900970 / 32700229					
Hail In #(s): 32901046 / 32700252					
Target Species: HALIBUT / SABLEFISH					
Bait Spp. SQ	Spp. Wt. 8				
Bait Spp. HD	Spp. Wt. 8				

Set/Haul	Set #	Haul #	Set/Haul	Set #	Haul #
Gear/Skate Details	ID A	# Set 3	# Lost	Gear/Skate Details	ID A
Catch Area (GMU)	SC		Catch Area (GMU)	SA	
Set Start Date/Time	(mm/dd) 04/22	(hh:mm) 06:13	Set Start Date/Time	(mm/dd) 04/24	(hh:mm) 15:21
Haul Start Date/Time	(mm/dd) 04/22	(hh:mm) 13:56	Haul Start Date/Time	(mm/dd) 04/25	(hh:mm) 18:22
Haul End Date/Time	(hh:mm)		Haul End Date/Time	(hh:mm)	
Set Start Lat	5 2 2 6 .2 8		Set Start Lat	5 1 1 0 .1 0	
Set Start Long	1 3 0 5 1 .3 5		Set Start Long	1 2 9 3 0 .5 0	
Set End Lat	5 2 3 2 .1 9		Set End Lat	5 1 0 8 .0 6	
Set End Long	1 3 0 5 0 .0 0		Set End Long	1 2 9 4 0 .1 0	
Depth in fathoms	Start 44	Min 33	Depth in fathoms	Start 100	Min 80
	End 60	Max 64		End 120	Max 120

Species Name	Retained			Released			Species Name	Retained			Released		
	Weight	Pieces	Bait	Weight	Pieces	Liced		Weight	Pieces	Bait	Weight	Pieces	Liced
Halibut - Legal	600	28				4	Halibut - Legal	100	4				
Halibut - Sub-L	/	/	/				Halibut - Sub-L	/	/	/			
Sablefish - Legal					5		Sablefish - Legal	1000	125				
Sablefish - Sub-L	/	/	/				Sablefish - Sub-L	/	/	/	200	30	
Lingcod - Legal	100	10					Lingcod - Legal						
Lingcod - Sub-L	/	/	/				Lingcod - Sub-L	/	/	/			
Dogfish - Mark.							Dogfish - Mark.					13	
Dogfish - UnMark.							Dogfish - UnMark.						
Species Name	Pieces	Bait	Pieces	Liced	Species Name	Pieces	Bait	Pieces	Liced				
Yelloweye	17				Yelloweye								
Quillback					Quillback								
Rougheye	3				Rougheye	13							
SS Thornyhead					SS Thornyhead								
Redbanded					Redbanded	10							
Big Skate			3		Big Skate			10					
Longnose Skate					Longnose Skate								
Turbot		10			Turbot								
Pacific Cod	15	2			Pacific Cod								
Canary	4				Shortraker	26			2				

Tagged Fish/Tag #(s): Sablefish A00731637, A00744833

IPHC USE: Collected by:

Comments: STRONG N.W. WIND.

Appendix 3: Schedule II – Other Groundfish Species Commercial Harvest Plan

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1. MANAGEMENT UPDATES & CHANGES FOR 2016/2017

1.1. In-Season Changes/Updates

In-season updates are available on the Fishery Notice website at: http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=commercial. In-season Sector Catch and Sector Cap summaries are updated daily and can be found at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/groundfond/index-eng.htm>

1.2. Outside Yelloweye Rockfish rebuilding

Based on updated science information, application of DFO's *Fishery Decision-Making Framework Incorporating the Precautionary Approach*, and consultation with interested parties, the Department is pursuing catch reductions for the outside population of Yelloweye Rockfish in Groundfish Management Areas 3 and 5.

The Department will review the efficacy of catch reduction measures at the end of each fishing season and consider any additional measures necessary to support stock rebuilding. Please refer to conditions of licence and this harvest plan for further information.

1.3. Commercial Management and Allocation of Big and Longnose Skates

Consistent with the Department's direction of explicit and transparent allocations and to further promote stewardship of skate species, consultation between DFO and groundfish fishing interests were initiated in 2013 to (1) establish total allowable catches (TACs) for these species in areas 3 C/D, 5A/B and 5C/D/E (2) strengthen commercial management measures, and (3) establish a commercial allocation formula that apportions the commercial TAC among commercial fisheries. These changes were incorporated in the 2015/16 IFMP. DFO planned to progressively reduce TACs over a 2 year period for Longnose Skate in each area and Big Skate in Area 3 C/D to support management objectives on these stocks; the last of these reductions will be implemented in the 2016-17 season.

An appeal process was established in 2015 for vessel owners wishing to appeal the allocation of Big or Longnose skate individual transferable quota assigned to the licence eligibility held by their vessel. No appeals were submitted and the appeal process has concluded. Permanent transfers of Big or Longnose skates are now permitted in the dogfish fishery.

1.4. Quillback, Copper, China, and Tiger Rockfish quota management

In 2015/16, DFO piloted a tool allowing temporary conversion of limited amounts of Quillback quota into Copper, China, Tiger quota to accommodate different harvesting strategies of individual fishers while maintaining CCT catch within the TAC. Attempted

implementation of the pilot program revealed technical challenges which DFO was unable to resolve. The pilot has been discontinued.

1.5. Strait of Georgia Sponge Reef Protection Measures

In 2015 DFO implemented fisheries closures for all bottom contact gear to protect nine glass sponges reefs found with the Strait of Georgia. The closures include the reefs and a 150 meter buffer zone that will provide protection of the glass sponge reefs. The coordinates of the closures and an illustration of the reef locations are below. These closures are the result of extensive consultation with First Nations, commercial and recreational interests and other stakeholders.

1.6. National Online Licensing System (NOLS) Client Support - Licensing Services

All Fish harvesters/Licence Holders/vessel owners are now required to use the National Online Licensing System (NOLS) to view, pay for and print their commercial fishing licences, licence conditions and/or receipts.

Training materials, including step-by-step guides and a detailed user training manual, are available online (<http://www.dfo-mpo.gc.ca/FM-GP/SDC-CPS/licence-permis-eng.htm>) to guide users of the system in completing their licensing transactions. The Department also provides client support and assistance on how to use the system via e-mail at fishing-peche@dfo-mpo.gc.ca or by calling toll-free at 1-877-535-7307 (7:00 AM to 8:00 PM Eastern, Monday to Friday).

For more information on how to register and use the system, visit the Department's website at [the website address above](#), or contact our client support.

2. SPECIES

Lingcod (*Ophiodon elongates*)

Spiny Dogfish (*Squalus suckleyi*)

Rockfish (*Sebastes sp.*) and Longspine/Shortspine Thornyheads (*Sebastolobus sp.*)

Halibut (*Hippoglossus stenolepis*)

Sablefish (*Anoplopoma fimbria*)

Skate (*Rajidae*)

Sole and Flounder (*Pleuronectiformes* other than *Hippoglossus stenolepis*)

Pacific cod (*Gadus macrocephalus*)

3. GEAR

Fishing for Schedule II – Other Species is permitted by hook and line gear, specifically longline, jig, and troll. When conducting a directed Lingcod trip only troll and jig gear is permitted; directed fishing for Lingcod with longline gear is not permitted.

4. OPEN TIMES

With the exception of those seasonal and permanent closures noted in this plan, or closures announced in-season, the Schedule II species fishery will be open from February 21, 2016 to February 20, 2017. On April 1, 2016, retention of lingcod will be permitted in management areas 3C, 3D, 5A, 5B, 5C, 5D and 5E. Retention of lingcod by hook and line gear in management area 4B will be permitted on May 1, 2016 and only in sub-Areas 12-1 to 12-13 and 12-15 to 12-48. From November 15, 2016 until March 31, 2017 a spawning closure for the retention of lingcod by hook and line gear will be in effect for all areas.

5. LICENSING

5.1. Licence Category

A Schedule II species, category C, communal commercial category FC or any vessel based licence is required to commercially harvest Schedule II - Other Species.

“Schedule II” refers to Schedule II, Part II of the *Pacific Fishery Regulations, 1993*. Category C, Schedule II - Other Species licence eligibilities are limited entry and vessel based. Category FC licence eligibilities are limited entry and party based.

Vessels fishing under the authority of a Schedule II-Other Species licence may also be designated to fish under the authority of a category Z licence.

5.2. Licence Renewal Fees

The commercial Schedule II Species (Category C) licence renewal fee is \$30.00.

There is no annual licence fee for communal commercial licences.

5.3. Licence Application and Issuance

Renewal of a Category C licence and payment of the fees must be done on an annual basis to retain the privilege to be issued the licence in the future, regardless of whether or not fishing is carried out. Those category L licenses not renewed by February 20, 2017 will cease and licence issuance requests will be unable to be considered in future.

Prior to annual licence issuance of a communal commercial licence, licence eligibility holders are required to annually designate the fishing vessel to hold the licence. This must be done by navigating to the ‘Submit a Request’ menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>).

Prior to annual licence issuance, vessel owners/licence eligibility holders are required to:

- a) Meet any Ministerial conditions placed on the licence eligibility.
- b) Ensure any conditions of the previous year’s licence such as completion and submission of fishing logbooks is met and accepted by the Groundfish Management Unit (GMU).

5.4. Licence Amendments

Prior to commencing to harvest under the authority of a Schedule II – Other Species licence the vesselowner/licence eligibility holder or an authorized representative must request and receive a 2016/2017 licence amendment from the Groundfish Management Unit. Licence Amendment Request Forms are available from the Pacific Fishery Licensing Units, or online at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/contact-en.html>

5.5. Licence Documents

Schedule II Species licence documents are valid from the date of issue to February 20, 2017.

Replacements for lost or destroyed licence documents may be obtained by reprinting your licence documents through the National Online Licensing System.

5.6. Vessel Replacement

The owner(s) of a category C licensed vessel may make an application to replace the commercial fishing vessel. Both the replacement vessel and the vessel being replaced must have a survey on file with the Pacific Fishery Licence Unit (PFLU) or submitted with the vessel replacement application. Vessels must be surveyed according to the Department guidelines.

The replacement vessel may not exceed the overall length of the vessel being replaced.

A vessel may hold only one Schedule II species licence eligibility.

A Schedule II licence may not be combined with other vessel based licence eligibilities except where the Integrated Fishery Management Plan (IFMP) for that species allows. Where a replacing vessel is eligible for a Schedule II species licence, it must be surrendered to the department or placed on another vessel prior to the placement of vessel based licence eligibility on the vessel.

6. BAIT

Commercial fishers wishing to use licensed catch as bait may do so, with the exception of rockfish. All such catch must be accurately recorded in the Integrated Groundfish Fishing Log. Rockfish may not be used as bait, and must be retained and landed.

While hauled out on a directed lingcod or dogfish trip octopus caught incidentally may be retained and used for bait, but cannot be landed and sold.

If a quota species is used as bait, the vessel will be assessed an average weight for that species as defined in Appendix 2 of the IFMP.

7. LINGCOD INDIVIDUAL TRANSFERABLE QUOTAS (ITQ)

7.1. Species Area Groups

Lingcod will be managed by the following management areas: 3C, 3D, 5A/B, 5C/D/E and 4B. ITQ may not be re-allocated from one area to another.

7.2. Annual ITQ Caps

7.2.1. TAC Holdings Permanent Quota Cap

All Schedule II licences will have annual ITQ caps for permanent quota. The total amount of permanent quota holdings may not exceed the quota caps listed below.

Species	Areas	TAC Holdings Cap (pounds)
Lingcod	3C	16,53440
Lingcod	3D	39,456682
Lingcod	5A, 5B	22,04608
Lingcod	5C, 5D, 5E	45,84146,292
Lingcod	Coastwide	74,440543

7.2.2. Licence Species Temporary and Permanent Quota Caps (Directed Species)

All Schedule II licences will have annual ITQ caps for some of their directed and non-directed catch. A licence may only hold up to a maximum of 10% of the area TAC for Lingcod, and up to a maximum of 5% of the overall TAC for Lingcod. Temporary and permanent reallocations will be permitted up to the species caps listed below.

Species	Areas	Licence Species Cap (pounds)
Lingcod	3C	33,069
Lingcod	3D	79,366
Lingcod	5A, 5B	44,017
Lingcod	5C, 5D, 5E	91,683
Lingcod	Coastwide	124,560

7.2.3. Quota Holdings Caps (Non-Directed Species)

Species	Areas	Quota Holdings Cap (% of Lingcod ITQ)
Canary rockfish	Coastwide	2.00
Spiny Dogfish	Coastwide	1.00
Halibut	Coastwide	15.00
Silvergray rockfish	Coastwide	2.00
Quillback rockfish	Coastwide	2.00
Copper, China and	Coastwide	2.00

Species	Areas	Quota Holdings Cap (% of Lingcod ITQ)
Tiger rockfish		
Yelloweye rockfish	Coastwide	3.00
Redbanded rockfish	Coastwide	2.00

7.2.4. Sector Holdings Caps

A licence may hold up to 25% Lingcod quota from the Trawl sector, as a percentage of the licence’s total coastwide Lingcod holdings.

7.3. Trip Limits

While hailed out on a directed Lingcod (Schedule II) fishing trip the following trip limits apply for species listed in the table below:

Species	Trip Limit (pounds)	
Pacific Cod	500	
Other Rockfish (as set out in Appendix 1 in the conditions of licence)	500 (under 10,000 lbs of Lingcod landed) 750 (greater than 10,000 lbs of Lingcod landed)	
*Big Skate	0	
*Longnose Skate	0	
Sole and Flounder	No limit	
Bocaccio	Landings (round weight) per trip may not exceed:	
	100 pounds where 10,000 pounds or less of lingcod is landed	100 pounds plus 1% of the amount of lingcod landed in excess of 10,000 pounds, to a maximum of 600 pounds of Bocaccio
*Retention of Big and Longnose Skate is not permitted while hailed out on a directed Lingcod trip		

7.4. Fishing Restrictions for ITQ Excess Overage

Licences that exceed their total Lingcod ITQ holdings by area by more than 10% or 100 pounds (whichever is greater) will be restricted from fishing for the remainder of the fishing year, or until such time that sufficient ITQ is reallocated to the licence to cover excess overages.

Licences that exceed their total non-directed ITQ holdings by area by more than 30% or 100 pounds (whichever is greater) will be restricted from fishing for the remainder of the fishing year, or until such time that sufficient ITQ is reallocated to the licence to cover any excess overages.

Licences with catch that exceeds their annual ITQ species caps will be restricted from fishing for the remainder of the fishing season.

Licenses that do not reconcile excess overages by February 20, 2017, will carry excess overages into the new season (see section 7.5). If a licence remains in excess overage following initial allocations of ITQ, the licence will be restricted from fishing until temporary reallocations for the 2017/2018 season are processed in mid-March, 2017.

7.5. Rules for Carryover of ITQ Overage and Underage

7.5.1. Carryover of Directed and Non-Directed ITQ Underage

Licences will be permitted to carryover uncaught ITQ up to 30% of their total directed or non-directed species (except Sablefish and dogfish) ITQ by area at the end of the 2016/2017. This amount includes any reallocations made during the year. The amount of underage will be added to the licence's ITQ holdings in 2017/2018. Any amount above the 30% will be forgone.

For Sablefish, licences will be permitted to carryover uncaught ITQ up to 15% of their Sablefish ITQ by area at the end of the 2016/2017 fishing season. This amount includes any reallocations made during the year. Underage amounts will be added to the licence's ITQ holdings in 2017/2018. Any amount above the 15% will be forgone.

For dogfish, licences will be permitted to carryover uncaught ITQ up to 10% of their dogfish ITQ by area at the end of the 2016/2017 fishing season. This amount includes any reallocations made during the year. The amount of underage will be added to the licence's ITQ holdings in 2017/2018. Any amount above the 10% will be forgone.

7.5.2. Carryover of Lingcod and Non-Directed ITQ Overage

A licence's catch may be up to 10% over the total Lingcod ITQ (this amount includes any reallocations made during the year) or 100 pounds, whichever is greater. For the proper conservation and management of the resource, the amount of the overage will be deducted from the licence's ITQ in the 2017/2018 fishing season and will count against the annual vessel cap for the following season.

A licence's catch may be up to 30% over the total non-directed species ITQ (this amount includes any reallocations made during the year) or 100 pounds, whichever is greater. For the proper conservation and management of the resource, the amount of the overage will be deducted from the licence's ITQ in the 2017/2018 fishing season and will count against the annual vessel cap for the following season.

7.6. Research Allocation

The Hook and Line Groundfish Association have agreed to set aside a portion of the lingcod commercial allocation in order to support the 2016 synoptic rockfish survey. The table below indicates the amount of lingcod allocated for the survey.

Lingcod	Groundfish Management Area	Allocation (pounds)
	3C	1,891
	3D	4,537
	5AB	0
	5CDE	0

7.7. Retention of Lingcod by Salmon Troll

All vessels wishing to retain any amount of Lingcod must have their fish validated through the established dockside monitoring program. In addition to this, any vessel wishing to land Lingcod must hold or acquire sufficient quota to do so.

Requirements include the following (less than 500 lbs of Lingcod per landing):

- Vessel must have sufficient ITQ
- Transportation requirement – All Lingcod must be transported by the licensed vessel either directly to land or to a fish pen
- Hail in and Hail out requirements through the designated service provider
- Specific locations and times at which landing of fish is permitted
- Landing requirements – The landing of any fish of any species is not permitted unless a designated observer is present to authorize the commencement of weight verification.

Vessels wishing to retain and land **more than 500 lbs** of Lingcod per landing must, in addition to all of the above, meet the electronic monitoring requirements (see Appendix 2).

8. DOGFISH INDIVIDUAL TRANSFERABLE QUOTAS (ITQ)

8.1. Species Area Groups

Dogfish will be managed by the following management areas: 3C/D, 5A/B/C/D/E and 4B. ITQ may not be re-allocated from one area to the other.

8.2. Dogfish Development Quota (DDQ)

The remaining 10% of the dogfish TAC will be made available to fish harvesters through a Dogfish Development Quota (DDQ). The purpose of the DDQ is to ensure the continued viability and ongoing development of the dogfish industry.

The application process requires interested dogfish processors to submit a joint application between their company and the licensed vessel(s) interested in fishing the dogfish quota. Application packages and further information on the DDQ process are

available online at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/dogfish-aiguillat/index-eng.htm>.

8.3. Annual ITQ Caps

8.3.1. TAC Holdings Permanent Quota Caps

All Schedule II licences will have annual TAC holding caps for permanent quota. The total amount of permanent quota a licence may hold will not exceed the holding caps listed below.

Species	Areas	TAC Holdings Cap (pounds)
Dogfish	3C,3D,5A,5B,5C,5D,5E	600,670
Dogfish	4B	100,111
Big Skate	Coastwide	7,000
Longnose Skate	Coastwide	6,500

8.3.2. Licence Species Temporary and Permanent Quota Caps (Directed Species)

All Schedule II licences will have annual ITQ caps for some of their directed and non-directed species. Temporary and permanent reallocations combined up to the species caps listed below will be a permitted.

Species	Areas	Licence Species Cap (pounds)
Dogfish	Coastwide	1,500,000*
Big Skate	Coastwide	30,000
Longnose Skate	Coastwide	20,000

*Vessels whose initial quota allocation exceeds this amount will be allowed to hold ITQ up to the initial allocation.

8.3.3. Quota Holdings Caps (Non-Directed Species)

Species	Areas	Quota Holdings Cap (% of Dogfish ITQ)
Canary rockfish	Coastwide	0.50
Halibut ¹	Coastwide	5.80
Lingcod	Coastwide	3.00
Rougheye rockfish	Coastwide	0.50
Sablefish ²	Coastwide	1.00
Silvergray rockfish	Coastwide	0.50
Shortraker rockfish	Coastwide	0.08
Shortspine Thornyhead	Coastwide	1.00
Quillback rockfish	3C, 3D, 5A, 5B,	0.50 (of dogfish coastwide ITQ)

Species	Areas	Quota Holdings Cap (% of Dogfish ITQ)
	5C, 5D, 5E	
Quillback rockfish	4B	0.25 (of dogfish 4B ITQ)
China, Copper and Tiger rockfish	3C, 3D, 5A, 5B, 5C, 5D, 5E	0.50 (of dogfish coastwide ITQ)
China, Copper and Tiger rockfish	4B	0.25 (of dogfish 4B ITQ)
Yelloweye rockfish ³	3C, 3D, 5A, 5B, 5C, 5D, 5E	0..33 (of dogfish coastwide ITQ)
Yelloweye rockfish	4B	1.00 (of dogfish 4B ITQ)
Redbanded rockfish	Coastwide	2.00

¹Halibut is also capped by a Quota Landings cap. A licence will be limited by the most restrictive cap.

²Sablefish is also capped by a Quota Landings cap. A licence will be limited by the most restrictive cap.

³Yelloweye is also capped by a Quota Landings cap. A licence will be limited by the most restrictive catch.

8.3.4. Quota Landings Caps (Non-Directed)

Species	Areas	Quota Landings Cap (pounds)			
Halibut ^o	Coastwide	10,000 if < 100,000 lbs of dogfish landed	20,000 if < 200,000 lbs of dogfish landed	30,000 if < 300,000 lbs of dogfish landed	40,000 if < 400,000 lbs of dogfish landed ^ψ
Sablefish	Coastwide	4,000 if < 100,000 lbs of dogfish landed	8,000 if < 200,000 lbs of dogfish landed	12,000 if < 300,000 lbs of dogfish landed	16,000 if < 400,000 lbs of dogfish landed
Yelloweye [*]	3C, 3D, 5A, 5B, 5C, 5D, 5E	1,320 if < 250,000 lbs of dogfish landed	2,000 if < 600,000 lbs of dogfish landed	2,640 if < 800,000 lbs of dogfish landed	3,300 if < 1,000,000 lbs of dogfish landed [†]

^ψHalibut allocations can continue to occur in blocks up to 10,000 lbs for every 200,000 lbs of dogfish landed.

^oHalibut is also capped by a Quota Holdings cap. A licence will be limited by the most restrictive cap

[∞]Sablefish is also capped by a Quota Holdings cap. A licence will be limited by the most restrictive cap

† Yelloweye allocations can continue to occur in blocks up to 1,000 lbs for every 200,000 lbs of dogfish landed, up to a total of 1,500,000 lbs of dogfish landed.

*Yelloweye is also capped by a Quota Holdings cap of 0.5%. A licence will be limited by the most restrictive cap.

8.4. Trip Limits

For non-directed species of groundfish caught while fishing dogfish the following trip limits will apply:

Species	Trip Limit (pounds)	
Pacific Cod	500	
Lingcod (4B)	400	
Other Rockfish (as set out in Appendix 1 of the conditions of licence)	Greater of 500 lbs or 2% of dogfish landed per trip	
Sole and Flounder	No limit	
Bocaccio	Landings (round weight) per trip may not exceed:	
	100 pounds where 10,000 pounds or less of dogfish is landed	100 pounds plus 1% of the amount of dogfish landed in excess of 10,000 pounds, to a maximum of 600 pounds of Bocaccio
Skate (4B)	6,000	

8.5. Fishing Restrictions for ITQ Excess Overage

Licences that exceed their total dogfish ITQ holdings by area by more than 10% or 5,000 pounds (whichever is greater) will be restricted from further fishing activity for the remainder of the fishing year, or until such time that sufficient ITQ is reallocated to the licence to cover any overages.

Licences that exceed their total non-directed ITQ holdings by area by more than 30% or 100 pounds (whichever is greater) will be restricted from further fishing activity for the remainder of the fishing year, or until such time that sufficient ITQ is reallocated to the licence to cover any overages.

Licences with catch that exceeds their annual ITQ species caps will be restricted from fishing for the remainder of the fishing season.

Licenses that do not reconcile excess overages by February 20, 2017, will carry excess overages into the new season (see section 8.6). If a licence remains in excess overage following initial allocations of ITQ, the licence will be restricted from fishing until temporary reallocations for the 2017/2018 season are processed in mid-March, 2017.

8.6. Rules for Carryover of ITQ Overage and Underage

8.6.1. Carryover of Directed and Non-Directed Species ITQ Underage

Licences will be permitted to carryover uncaught ITQ up to 10% of their total dogfish and Halibut species ITQ by area at the end of the 2016/2017 fishing season. This amount includes any reallocations made during the year. This underage will be added to the licence's ITQ holdings in 2017/2018. Any amount above the 10% will be forgone.

Licences will be permitted to carryover uncaught ITQ up to 30% of their total rockfish and Lingcod species ITQ by area at the end of the 2016/2017 fishing season. This amount includes any reallocations made during the year. This underage will be added to the licence's ITQ holdings in 2017/2018. Any amount above the 30% will be forgone.

Licences will be permitted to carryover uncaught ITQ up to 15% of their total Sablefish species ITQ by area at the end of the 2016/2017 fishing season. This amount includes any reallocations made during the year. This underage poundage will be added to the licence's ITQ holdings in 2017/2018. Any amount above the 15% will be forgone.

8.6.2. Carryover of Directed and Non-Directed Species ITQ Overage

A licence's catch may be up to 10% over the total dogfish species ITQ (this amount includes any reallocations made during the year) or 5,000 pounds, whichever is greater. For the proper conservation and management of the resource, the amount of the overage will be deducted from the licence's ITQ (by area) in the 2017/2018 fishing season and the overage will count against the annual ITQ caps for the following season.

A licence's catch may be up to 30% over the total non-directed species ITQ (this amount includes any reallocations made during the year) or 100 pounds, whichever is greater. For the proper conservation and management of the resource, the amount of the overage will be deducted from the licence's ITQ (by area) in the 2017/2018 fishing season and the overage will count against the annual ITQ caps for the following season.

9. REALLOCATION PROCEDURES

9.1. Reallocation of Directed and Non-Directed Species ITQ

The following guidelines for the reallocation of directed and non-directed species ITQ will be in effect for the 2016/2017 lingcod and dogfish fisheries.

9.1.1. Subject to annual ITQ caps and sector caps, upon application, licence eligibility holders will be permitted to make unlimited temporary reallocations of directed and non-directed species ITQs. A "Temporary Reallocation Request for Integrated Groundfish Fisheries" must be faxed to the GMU and, if approved, a licence amendment will be issued to reflect new ITQ amounts. The most current licence amendment must be onboard when fishing.

9.1.2. The 2016/2017 licence must be issued prior to any ITQ being reallocated.

- 9.1.3. Request for temporary reallocation for the 2016/2017 season must be received by 16:00 hours Pacific Time on February 20, 2017 in order to be processed.
- 9.1.4. Requests for permanent reallocation of ITQ must be received by 16:00 hours local time on February 2, 2017 in order to be processed
- 9.1.5. Permanent reallocations of ITQ will be expressed as a percentage of the TAC, and will be added to the receiving licence eligibility's percentage of the TAC.
- 9.1.6. For permanent ITQ reallocations, all vessel owners/licence eligibility holders of record must complete and sign a "Permanent Reallocation Request for Integrated Groundfish Fisheries." For temporary reallocations of ITQ only one owner or the licence eligibility holder is required to sign the "Temporary Reallocation Request for Integrated Groundfish Fisheries" form.
- 9.1.7. ITQ that has already been caught or deemed "fished" cannot be reallocated.
- 9.1.8. The minimum quantity of ITQ that may be reallocated is one pound.
- 9.1.9. Temporary reallocations are only valid for the current fishing season.
- 9.1.10. Reallocations for the 2016/2017 season will not be processed until 08:00 hours local time March 15, 2016.

9.2. Temporary Conversion of Quillback ITQ into Copper, China and Tiger ITQ

10. DUAL FISHING

Dual fishing means fishing for commercial and First Nation Food, Social, and Ceremonial purposes on the same fishing trip. Dual fishing is authorized through licence conditions for commercial groundfish fisheries. Vessel masters considering dual fishing are responsible for reviewing their licence conditions to ensure they are aware of the dual fishing requirements.

Before hailing-out on a dual fishing trip, the vessel master must obtain a dual fishing designation certificate from a designating First Nation that has a communal licence authorizing the harvest of groundfish. The designation certificate must contain all of the information set out in the conditions of licence. If any of the information is missing the designation certificate will not be considered valid and the vessel master cannot dual fish. A designation certificate template is available on the DFO website: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.html>

Aboriginal organizations may issue their own designation certificate as long as the required information is included.

When hailing-out, the vessel master must notify the hail service provider that they will be dual fishing, provide the name of the First Nation that issued the designation certificate, and provide the unique designation certificate identification number. The vessel master must carry the designation certificate on board the vessel at all times during the fishing trip.

All retained fish, including both commercial and FSC catch, must be recorded in the “retained” column of the Integrated Groundfish Fishing Logbook. Additionally, fish retained as FSC catch must be separated out and recorded by set and by species in the “comments” section of the Integrated Groundfish Fishing Logbook.

When hailing-in, the vessel master must provide an estimate, by species, of the weight of fish caught under the authority of the designation certificate. Unless the designating First Nation requests to have the FSC fish landed and validated at a different location, all fish from the trip must be landed at the same place and validated by a designated groundfish dockside observer. At the time of offload, the vessel master must provide a valid designation certificate to the dockside observer. If one is not provided, all catch from the trip will be considered commercial catch until the completion of a review by the Groundfish Management Unit and discussion with the vessel master. Furthermore, if FSC fish are landed at a different location than the commercial catch, an FSC validation record containing the verified weight and the number of pieces by species must be completed by a fisheries representative of the designating First Nation organization. The vessel master must obtain a copy of the FSC validation record and provide it to the designated groundfish dockside monitor at the time of the commercial offload.

11. CLOSURES

11.1. Strait of Georgia/Howe Sound Sponge Reef Closed Areas

As of spring 2015 DFO implemented a number of closures to all bottom contact gear in the area of the identified glass sponges reefs found with the Strait of Georgia and Howe Sound. These closures were the result of extensive consultation with First Nations, commercial and recreational industries and other stakeholders were initiated in 2012. Coordinates of each closure and an illustration of the locations of the nine Strait of Georgia Glass reef complexes are below:

1. Howe Sound – “Defence Islands Closure”

Includes that portion of Subarea 28-4 that lies inside the area bounded by a line that:

begins at	49 34.102N	123 17.070W
then southerly to	49 33.730N	123 16.562W
then to	49 33.553N	123 16.462W
then to	49 33.438N	123 16.750W
then to	49 33.707N	123 17.201W
then to	49 33.993N	123 17.391W
thence back to the beginning point.		

2. Howe Sound – “Queen Charlotte Channels Closures” (4 closed areas)

Closure # 1: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 21.486N	123 17.254W
then southerly to	49 20.528N	123 17.690W
then to	49 20.401N	123 17.956W

then to	49 20.765N	123 18.794W
then to	49 20.982N	123 18.584W
then to	49 21.098N	123 18.037W
then to	49 21.501N	123 17.737W
thence back to the beginning point.		

Closure# 2: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 20.288N	123 17.693W
then southeasterly to	49 20.224N	123 17.501W
then to	49 19.993N	123 17.377W
then to	49 19.802N	123 17.444W
then to	49 19.720N	123 17.841W
then to	49 19.937N	123 18.107W
then to	49 20.288N	123 17.693W
thence back to the beginning point.		

Closure# 3: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 19.296N	123 19.905W
then southerly to	49 19.918N	123 19.847W
then to	49 19.307N	123 20.344W
then to	49 19.643N	123 20.421W
then to	49 19.819N	123 20.361W
then to	49 19.947N	123 20.097W
thence back to the beginning point.		

Closure# 4: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 20.637N	123 19.162W
then easterly to	49 20.577N	123 18.720W
then to	49 20.441N	123 18.637W
then to	49 20.068N	123 18.818W
then to	49 20.076N	123 19.135W
then to	49 19.718N	123 19.188W
then to	49 19.726N	123 19.514W
then to	49 20.259N	123 19.828W
thence back to the beginning point.		

3. Strait of Georgia “Foreslope Hills Closure”

Includes that portion of Subarea 29-3 that lies inside the area bounded by a line that:

begins at	49 09.634N	123 23.048W
then southerly to	49 09.389N	123 22.622W
then to	49 09.187N	123 22.587W
then to	49 09.211N	123 23.567W
then to	49 09.646N	123 23.543W
thence back to the beginning point.		

4. Strait of Georgia – “Outer Gulf Islands Closure” (4 closed areas)

Closure# 1: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 54.936N	123 19.589W
then southerly to	48 54.283N	123 18.529W
then to	48 54.114N	123 18.619W
then to	48 54.065N	123 18.771W
then to	48 54.787N	123 19.929W
then to	48 54.902N	123 19.793W
thence back to the beginning point.		

Closure# 2: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 52.588N	123 15.261W
then easterly to	48 52.520N	123 14.537W
then to	48 51.971N	123 13.768W
then to	48 51.795N	123 13.947W
then to	48 52.150N	123 14.444W
then to	48 52.038N	123 14.678W
then to	48 52.479N	123 15.521W
thence back to the beginning point.		

Closure# 3: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 51.602N	123 13.233W
then southerly to	48 51.309N	123 12.751W
then to	48 50.913N	123 12.938W
then to	48 50.8441N	123 13.059W
then to	48 51.1634N	123 13.662W
then to	48 51.579N	123 13.378W
thence back to the beginning point.		

Closure# 4: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 50.999N	123 12.391W
then southerly to	48 50.607N	123 11.603W
then to	48 50.097N	123 10.956W
then to	48 49.959N	123 11.182W
then to	48 50.857N	123 12.654W
then to	48 50.959N	123 12.566W
thence back to the beginning point.		

5. Strait of Georgia – “Gabriola Island Closure”

Includes that portion of Subarea 17-11 that lies inside the area bounded by a line that:

begins at	49 13.672N	123 47.577W
then southerly to	49 13.235N	123 47.429W
then to	49 13.185N	123 47.882W
then to	49 13.391N	123 48.119W
then to	49 13.623N	123 48.166W
thence back to the beginning point.		

6. Strait of Georgia – “Parksville Closure”

Includes those portions of Subareas 14-2 and 14-3 that lies inside the area bounded by a line that:

begins at	49 21.680N	124 19.762W
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then southeasterly to	49 21.514N	124 18.893W
then to	49 21.191N	124 17.723W
then to	49 21.064N	124 17.724W
then to	49 20.725N	124 18.380W
then to	49 21.432N	124 19.811W
thence back to the beginning point.		

7. Strait of Georgia – “East of Hornby Islands Closure”

Includes that portion of Subarea 14-6 that lies inside the area bounded by a line that:

begins at	49 33.490N	124 29.229W
then southerly to	49 32.701N	124 28.760W
then to	49 31.657N	124 29.434W
then to	49 31.663N	124 29.896W
then to	49 32.651N	124 29.752W
then to	49 33.340N	124 29.935W
then to	49 33.498N	124 29.773W
thence back to the beginning point.		

8. Strait of Georgia – “Sechelt Closure”

Includes that portion of Subarea 29-2 that lies inside the area bounded by a line that:

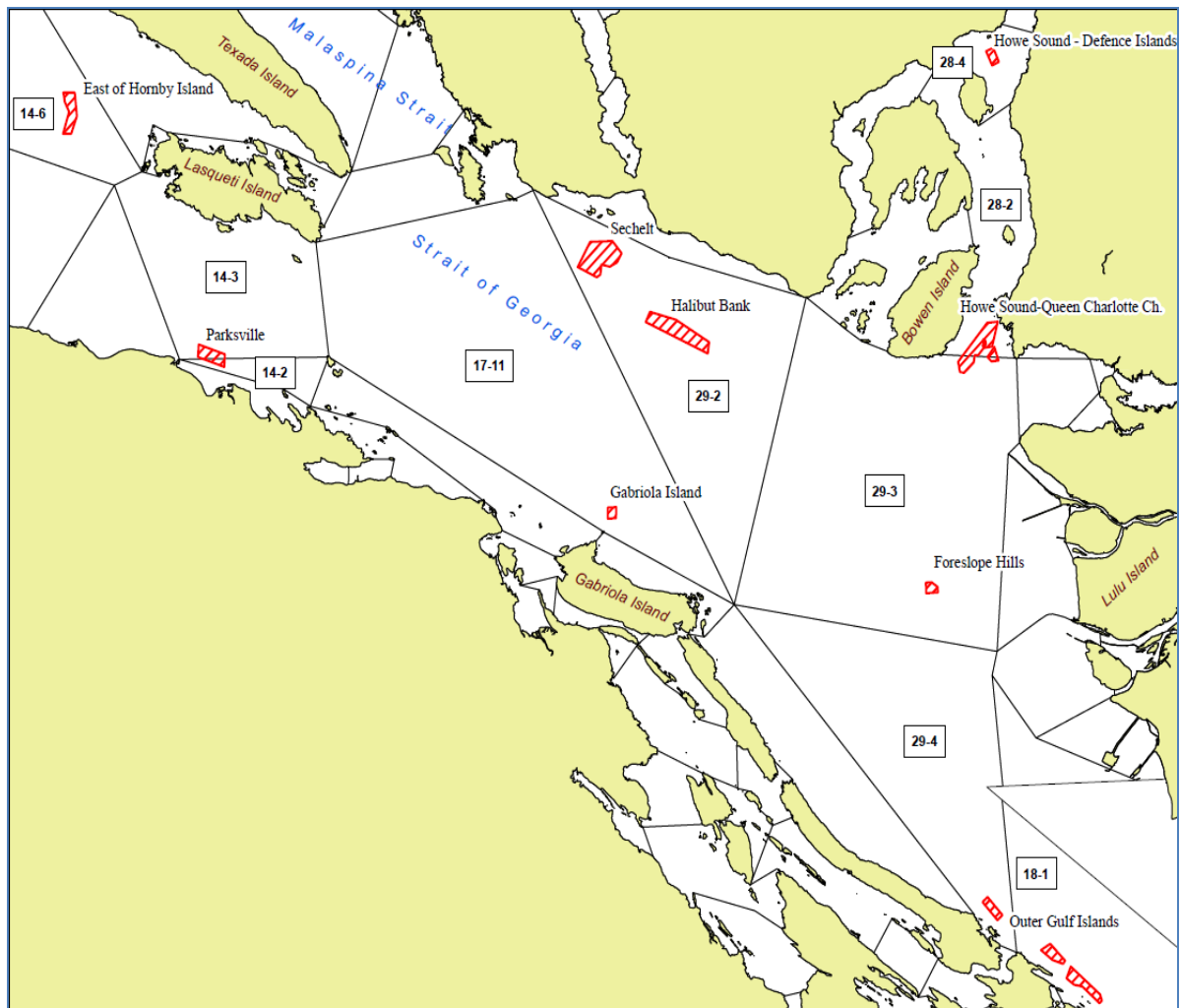
begins at	49 25.948N	123 48.889W
then easterly to	49 25.899N	123 47.266W
then to	49 25.373N	123 46.494W
then to	49 24.734N	123 47.083W
then to	49 24.910N	123 47.951W
then to	49 24.253N	123 48.283W
then to	49 24.845N	123 49.914W
thence back to the beginning point.		

9. Strait of Georgia – “Halibut Bank Closure”

Includes that portion of Subarea 29-2 that lies inside the area bounded by a line that:

begins at	49 21.768N	123 41.501W
then southerly to	49 21.174N	123 40.045W
then to	49 20.961N	123 40.139W
then to	49 20.803N	123 39.860W
then to	49 20.565N	123 40.182W
then to	49 21.610N	123 41.843W
then to	49 22.555N	123 44.456W
then to	49 22.188N	123 42.167W
then to	49 21.945N	123 42.087W
then to	49 21.673N	123 42.643W
then to	49 21.895N	123 43.908W
then to	49 22.174N	123 44.748W
thence back to the beginning point.		

Strait of Georgia Glass Sponge Reef Locations:



11.2. Rockfish Conservation Areas

Effective February 1, 2007 a suite of Rockfish Conservation Areas (RCAs) came into effect. Designation of the final 164 closed areas is a result of over three years of consultation with many stakeholders. Information on RCAs can be found on the Department's internet site at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/rca-acs/index-eng.html>.

11.3. Gwaii Haanas National Marine Conservation Area

Harvesters are reminded that the zones within the Gwaii Haanas National Marine Conservation Area Reserve as described below are closed to fishing. For background information see IFMP section 8.2.

Areas closed are described below:

All tidal waters of Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site:

11.3.1. Burnaby Narrows

Those waters of Subareas 2-13 and 2-16 inside a line:

commencing at	52°23.049 N	131°23.438 W
then east to	52°23.077 N	131°22.908 W
following the southern shoreline of Kat Island east to	52°23.107 N	131°22.274 W
then east to	52°23.295 N	131°21.34W
following the western shoreline of Burnaby Island south to	to 52°20.951N	131°20.509 W
then west to	52°20.733 N	131°21.072 W
then north following the eastern shoreline of Moresby Island back to the point of commencement.		

11.3.2. Louscoone Estuary

Those waters of Subareas 2-33 and 2-34 north of a line:

drawn from	52°11.836 N	131°15.658 W
then true east to	52°12.271 N	131°14.594 W

11.3.3. Flamingo Estuary

Those waters of Subarea 2-37 north of a line:

drawn from	52°14.456 N	131°22.234 W
then southeast to	52°14.246 N	131°21.489 W

11.3.4. Gowgaia Estuary

Those waters of Subarea 2-41 east of a line:

drawn from	52°24.944 N	131°32.138 W
then southeast to	52°24.238 N	131°32.024 W

11.3.5. Cape Saint James

Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line:

commencing at	51°56.523 N	131°01.522 W
then southwest to	51°55.627 N	131°02.574 W
then southeast to	51°52.5 N	130°57.919 W
then south to	to 51°51.676 N	130°57.805 W
then southeast to	51°50.349 N	130°56.442 W
then northeast to	51°51.062 N	130°54.717 W
then north to	51°53.888 N	130°55.608 W
then northwest to	51°58.671 N	130°59.464 W
then west to	51°58.743 N	131°00.606 W
and then following the southern shore of Kungit Island to the point of		

commencement.

11.3.6. SGang Gwaay

Those waters of Subareas 2-31 and 142-1
inside a 3 km radius from the centre

point on Anthony Island located at: 52°05.655' N 131°13.178' W

11.4. Permanent Closures

11.4.1. Strait of Georgia Lingcod

Closed year-round to the retention of Lingcod in the commercial fishery in Areas
and Subareas 13 to 19, 20-5 to 20-7, 28 and 29.

11.4.2. Georgia Strait and WCVI Closures

Area/Subarea	Rationale for Closure
13-2 to 13-9, 13-11 and 13-27	Closed to all commercial fishing.
14-11 and 14-14	Harbour areas.
16-3 and 16-4	Harbour areas.
17-7 and 17-14	Harbour areas.
17-20 and 17-21	Protect shallow water environment.
18-8	Harbour areas.
19-1	Harbour areas.
19-6	Protect shallow water environment.
19-7 to 19-12	Designated sport-fishing area (open for dogfish only).
20-6 and 20-7	Harbour areas.
28	Designated sport-fishing areas.
29-7 to 29-17	Protect shallow water environment and Fraser River.
22	Protect shallow fresh water environment.

11.5. Year-Round Closures

The following areas will be closed February 21, 2016 to February 20, 2017 to reduce
harvesting pressure and provide improved access for First Nations food, social and
ceremonial purposes.

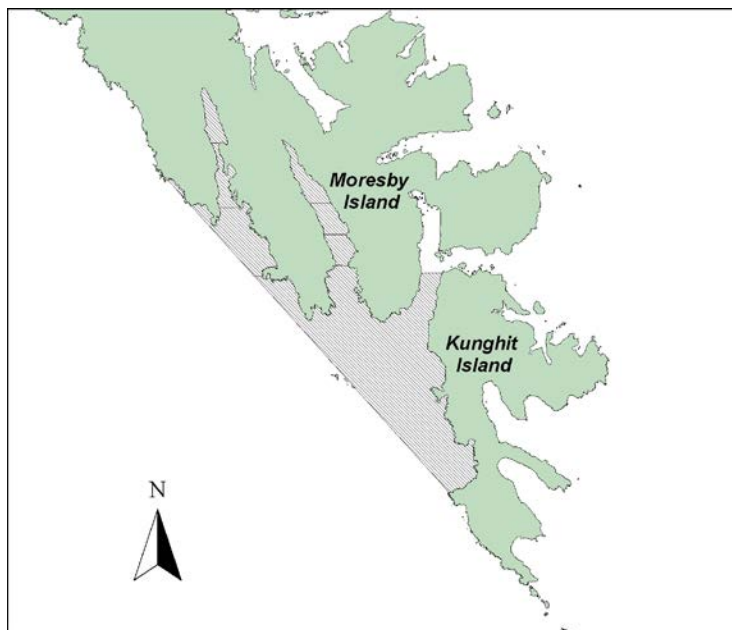
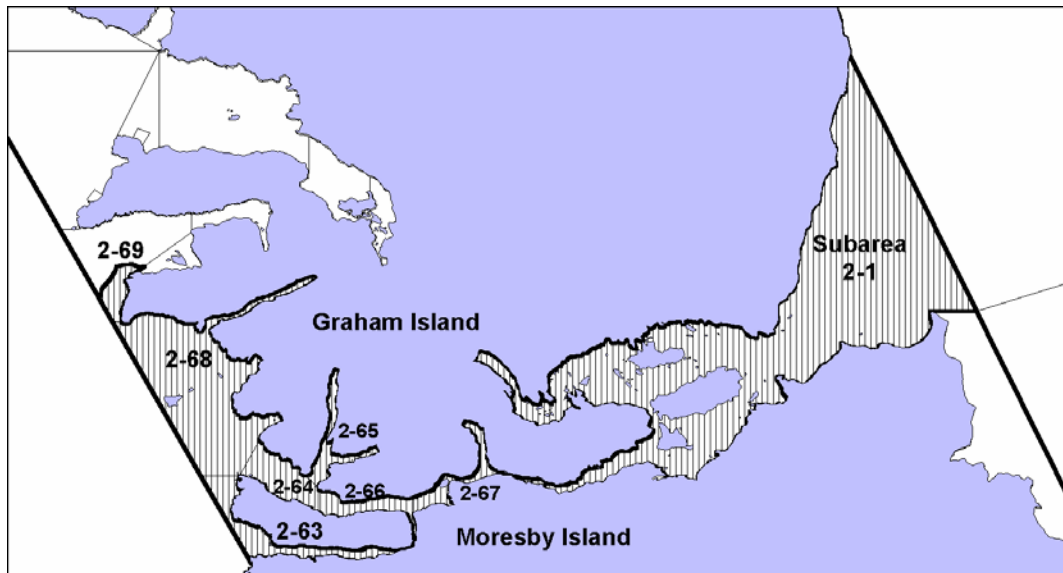
11.5.1. Queen Charlottes

Subareas 2-1, 2-31 to 2-37, 2-63 to 2-68; and that portion of Subarea 2-69 from Hunter
Point to Fame Point shoreward of the coordinates laid out below. These areas are closed
year round for all commercial groundfish fisheries. The intent of the closure is to reduce
harvesting pressure on localized stocks of fish and to provide improved access for First
Nations food, social and ceremonial purposes.

Subarea 2-69:

The portion of Subarea 2-69 inside a line:		
that begins at Fame Point	53°17.060' N	132°42.415' W

then to	53°17.060' N	132°43.800' W
then to	53°16.350' N	132°44.700' W
then abutting the boundary of 2-68	53°15.208' N	132°43.597' W
Then to Hunter Point	53°15.208' N	132°42.984' W

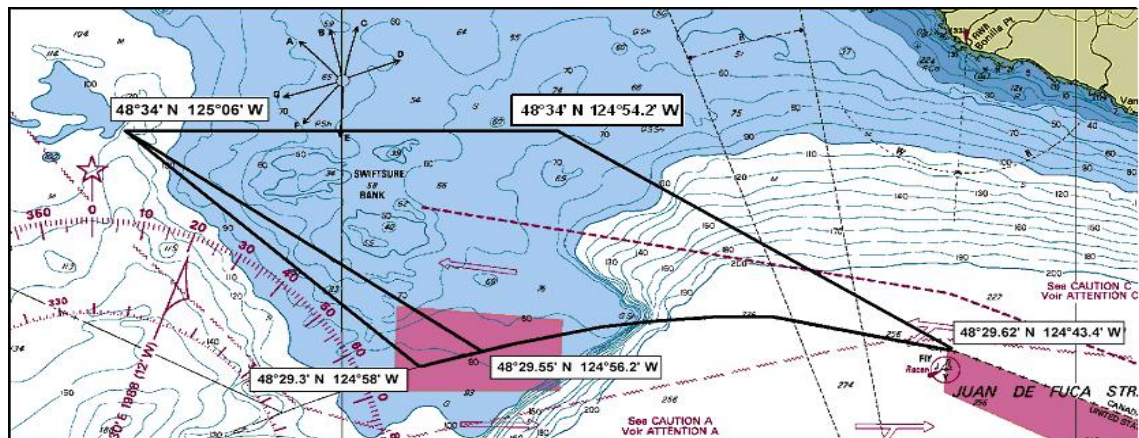


11.5.2. Swiftsure Commercial

Those portions of Subareas 121-1 and 121-2 inside a line:
that begins at 48°34.0' N 125°06.0' W
then true east to 48°34.0' N 124°54.2' W
then to 48°29.62' N 124°43.4' W
then following the International Boundary
between Canada and the United States of
America to 48°29.3' N 124°58.0' W
then to the beginning point.

11.5.3. Swiftsure Recreational

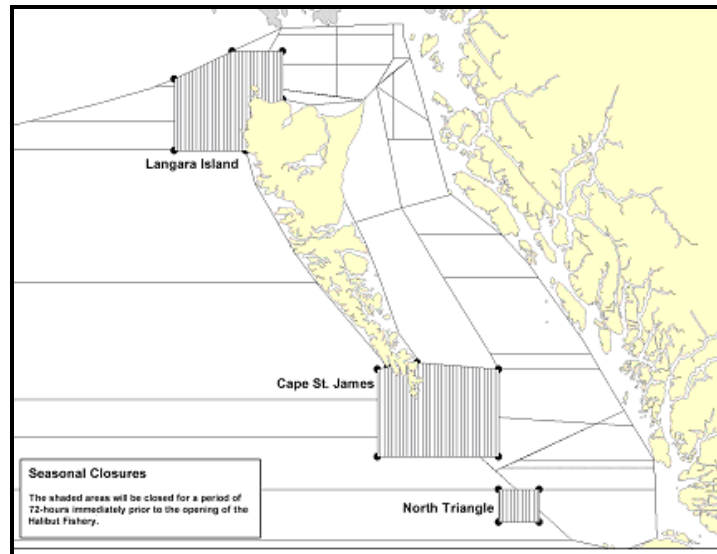
Those portions of Subareas 121-1 and 121-2 inside a line:
that begins at 48°34.0' N 125°06.0' W
then true east to 48°34.0' N 124°54.2' W
then to 48°29.62' N 124°43.4' W
then following the International Boundary
between Canada and the United States of
America to 48°29.55' N 124°56.2' W
then to the beginning point.



11.6. Seasonal Closures

These closures go into effect 72 hours prior to the halibut opening each year for all commercial hook and line fishing vessels. Their intent is to ensure a fair and orderly opening for the halibut fishery.

Coast-wide Map of 72-Hour “Halibut Opening” Closure



Those portions of Area 101 that are:
 east of the meridian passing through 134°00.0' west longitude;
 west of the meridian passing through 132°40.0' west longitude; and
 south of the parallel passing through 54°30.0' north latitude.

Those portions of Subareas 102-2, 102-3, 108-2, 130-2, 130-3 and 142-1 that are inside a line that:

that begins at	52°11.0' N	131°22.16' W
then westerly to	52°10.0' N	131°30.0' W
then true south to	51°30.0' N	131°30.0' W
then true east to	51°30.0' N	130°00.0' W
then true north to	52°10.0' N	130°00.0' W
then westerly to	52°13.0' N	131°00.3' W

Those portions of Area 111 and Subarea 130-1 that lie inside a line that:

begins at	51°15.0' N	130°00.0' W
then true east to	51°15.0' N	129°30.0' W
then true south to	51°00.0' N	129°30.0' W
then true west to	51°00.0' N	130°00.0' W
then true north to the beginning point.		

Appendix 4: Rockfish by Hook and Line (Inside ZN) Commercial Harvest Plan

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1. MANAGEMENT UPDATES & CHANGES FOR 2016/2017

1.1. In-Season Changes/Updates

In-season updates are available on the Fishery Notice website at: http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=commercial.

In-season Sector Catch and Sector Cap summaries are updated daily and can be found at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.htm>

1.2. Outside Yelloweye Rockfish rebuilding

Based on updated science information, application of DFO's *Fishery Decision-Making Framework Incorporating the Precautionary Approach*, and consultation with interested parties, the Department is pursuing catch reductions for the outside population of Yelloweye Rockfish in Groundfish Management Areas 3 and 5.

The Department will review the efficacy of catch reduction measures at the end of each fishing season and consider any additional measures necessary to support stock rebuilding. Please refer to conditions of licence and this harvest plan for further information.

1.3. Commercial Management and Allocation of Big and Longnose Skates

Consistent with the Department's direction of explicit and transparent allocations and to further promote stewardship of skate species, consultation between DFO and groundfish fishing interests were initiated in 2013 to (1) establish total allowable catches (TACs) for these species in areas 3 C/D, 5A/B and 5C/D/E (2) strengthen commercial management measures, and (3) establish a commercial allocation formula that apportions the commercial TAC among commercial fisheries. These changes were incorporated in the 2015/16 IFMP. DFO planned to progressively reduce TACs over a 2 year period for Longnose Skate in each area and Big Skate in Area 3 C/D to support management objectives on these stocks; the last of these reductions will be implemented in the 2016-17 season.

1.4. Quillback, Copper, China, and Tiger Rockfish quota management

In 2015/16, DFO piloted a tool allowing temporary conversion of limited amounts of Quillback quota into Copper, China, Tiger quota to accommodate different harvesting strategies of individual fishers while maintaining CCT catch within the TAC. Attempted implementation of the pilot program revealed technical challenges. Due to limited resources, DFO was unable to resolve these issues and the pilot has been discontinued.

1.5. Strait of Georgia Sponge Reef Protection Measures

In 2015 DFO implemented fisheries closures for all bottom contact gear to protect nine glass sponges reefs found with the Strait of Georgia. The closures include the reefs and a 150 meter buffer zone that will provide protection of the glass sponge reefs. The coordinates of the closures and an illustration of the reef locations are below. These closures are the result of extensive consultation with First Nations, commercial and recreational interests, and other stakeholders.

1.6. National Online Licensing System (NOLS) - Licensing Services

All Fish harvesters/Licence Holders/vessel owners are now required to use the National Online Licensing System (NOLS) to view, pay for and print their commercial fishing licences, licence conditions and/or receipts.

Training materials, including step-by-step guides and a detailed user training manual, are available online (<http://www.dfo-mpo.gc.ca/FM-GP/SDC-CPS/licence-permis-eng.htm>) to guide users of the system in completing their licensing transactions. The Department also provides client support and assistance on how to use the system via e-mail at fishing-peche@dfo-mpo.gc.ca or by calling toll-free at 1-877-535-7307 (7:00 AM to 8:00 PM Eastern, Monday to Friday).

For more information on how to register and use the system, visit the Department's website at [at the website address above](#), or contact our client support.

2. SPECIES

Rockfish (*Sebastes sp.*) and Longspine/Shortspine Thornyheads (*Sebastolobus sp.*)
Halibut (*Hippoglossus stenolepis*)
Lingcod (*Ophiodon elongates*)
Spiny Dogfish (*Squalus suckleyi*)
Skate (*Rajidae*)
Sole and Flounder (*Pleuronectiformes* other than *Hippoglossus stenolepis*)
Pacific cod (*Gadus macrocephalus*)
Greenlings (*Hexagrammos sp.*)

3. GEAR

Fishing under a category ZN is permitted to occur by hook and line gear, specifically longline, jig, and troll.

4. OPEN TIMES

With the exception of those seasonal and permanent closures noted in this plan, or closures announced in-season, the Rockfish by Hook and Line (Inside ZN) fishery will be open from February 21, 2016 to February 20, 2017.

5. FISHING AREAS

Subject to closures listed in Section 10, the Inside Quota Management Area for rockfish is defined as: Areas 13 to 20, 28, 29 and Subareas 12-1 to 12-13, 12-15 to 12-48. Areas and Subareas are described in the *Pacific Fishery Management Area Regulations, 2007*.

6. LICENSING

6.1. Licence Category

A commercial rockfish category ZN or communal commercial category FZN licence eligibility is limited entry and party based.

6.2. Licence Renewal Fees

The commercial rockfish licence renewal application fee is \$100 annually. There is no annual licence renewal fee for communal commercial category FZN licenses.

6.3. Licence Application and Issuance

Renewal of a Category ZN licence and payment of the fees must be done on an annual basis to retain the privilege to be issued the licence in the future, regardless of whether or not fishing is carried out. Those category L licenses not renewed by February 20, 2017 will cease and licence issuance requests will be unable to be considered in future.

Prior to annual licence issuance of a communal commercial licence, licence eligibility holders are required to annually designate the fishing vessel to hold the licence. This must be done by navigating to the 'Submit a Request' menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>).

To avoid delays in licence issuance, please ensure the payment, option selection and designated vessel information is submitted all at the same time through the Submit a Request menu selection within the National Online Licensing System.

Vessels may be designated with up to 8 'Inside rockfish' licences at one time during a season.

Prior to annual licence issuance, licence eligibility holders are required to:

- a) Meet any Ministerial conditions placed on licence eligibility.
- b) Indicate through the National Online Licensing System if you do not intend to harvest under the authority of the rockfish licence eligibility in 2016.
- c) Ensure any conditions of the previous year's licence have been met.
- d) Designate a registered commercial fishing vessel that is eligible for any vessel

based licence (i.e.) salmon, schedule II species, geoduck, Sablefish, Halibut, crab, shrimp by trawl and prawn and shrimp by trap, a valid communal commercial licence or a valid salmon category N licence through the National Online Licensing System. Designated vessels may not exceed the maximum vessel length (MVL) of the initial licence designated. The MVL will be waived for any additional designated inside rockfish licences.

6.4. Licence Options

The designated vessel may not exceed to the Maximum Vessel Length (MVL) of the initial inside rockfish licence designated, however, the option to participate in the directed ZN fishery may be made for each additional inside rockfish licence designated to the vessel at the time of licence issuance.

Should the licence holder select the option to not participate in the directed ZN fishery, the designated vessel may exceed the MVL of the rockfish licence eligibility. The designated vessel will then reallocate rockfish quota to other licence eligibilities

If the selection has been made to not participate in the directed rockfish fishery at the beginning of the season, the licence holder may choose to change to the option to participate at a later date, as long as the vessel meets all the length requirements, where applicable.

Option selection for each rockfish licence may be done by navigating to the 'Submit a Request' menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>).

6.5. Licence Amendments

Prior to commencing to harvest under the authority of a rockfish licence, the licence eligibility holder or an authorized representative must request and receive a 2016/2017 licence amendment from the Groundfish Management Unit.

Licence Amendment Request Forms and all other applicable forms are available online at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/contact-en.html>

6.6. Licence Documents

Rockfish licence documents are valid from the date of issue to February 20, 2017.

Replacements for lost or destroyed licence documents may be obtained by reprinting the licence documents through the licence holders account via the National Online Licensing System.

6.7. Vessel Redesignations

Redesignation of rockfish licences is permitted at any time during the year, provided that all Conditions of Licence has been met (i.e. completion, submission and acceptance by GMU of logbooks).

The Application for Vessel Redesignation form is available online at <http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/licence-commercial-eng.html> or by contacting the PFLU by phone at 1-877-535-7307 or via e-mail at fishing-peche@dfo-mpo.gc.ca.

Prior to a redesignation being processed, licence eligibility holders must:

- Confirm that the conditions of licence have been met (e.g. log book or fish slips submitted, etc.) E.g. if a licence was issued on January 15th and a request to redesignate is received on March 10th then logs and sales slips are required to be submitted up to March 10.
- Designate a registered Canadian commercial vessel.
- Ensure the designated vessel holds a vessel based licence eligibility (as listed above) and does not exceed the Maximum Vessel Length (MVL) of the licence eligibility to be redesignated. For category FZN licence eligibilities the designated vessel must meet the established length restrictions.

Once the redesignation form has been completed, the form must be submitted through the 'Submit a Request' menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>.

6.8. Licence Eligibility Nominations

Rockfish category ZN licence eligibilities may be nominated from one party to another. Licence eligibility holders may indicate their intention to no longer apply for a rockfish licence by completing a nomination form provided by Fisheries and Oceans Canada. Where such an intention is stated, the Minister may consider issuance of the licence to a person nominated by the previous licence eligibility holder.

The Nomination for Category Z Licence Eligibility form is available online at <http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/licence-commercial-eng.html> or by contacting the Pacific Fishery Licence Unit (PFLU) by phone at 1-877-535-7307 or via e-mail at fishing-peche@dfo-mpo.gc.ca.

Communal commercial rockfish category FZN licence eligibilities may not be nominated as these are allocated annually to First Nation groups.

7. BAIT

Commercial fishers wishing to use licensed catch as bait may do so, with the exception of rockfish. All such catch must be accurately recorded in the Integrated Groundfish Fishing Log. Rockfish may not be used as bait, and must be retained and landed.

Octopus caught incidentally may be retained and used for bait under authority of a Rockfish licence eligibility, but cannot be landed and sold.

If a quota species is used as bait, the vessel will be assessed an average weight for that species as defined in Appendix 2 of the IFMP.

8. ROCKFISH INDIVIDUAL TRANSFERABLE QUOTAS (ITQ)

8.1. Annual ITQ Caps

All ZN licences will have annual ITQ caps for some of their directed and non-directed catch. Reallocations up to the species caps listed below will be a permitted.

8.1.1. TAC Holdings Permanent Quota Caps

All ZN Inside licences will have annual ITQ caps for permanent quota. The total amount of permanent reallocations of quota may not exceed the quota caps listed below.

Species	Areas	TAC Holdings Cap (pounds)
Quillback, rockfish	4B	4,180
Copper, China and Tiger rockfish	4B	504
Yelloweye rockfish	4B	1,091

8.1.2. Licence Species Temporary and Permanent Quota Caps (Directed Species)

Species	Areas	Licence Species Cap (pounds)
Quillback rockfish	4B	15,642
Copper, China and Tiger rockfish	4B	1,931
Yelloweye rockfish	4B	4,095

8.1.3. Quota Holdings Caps (Non-Directed Species)

Species	Areas	Licence Species Cap (pounds)
Dogfish	4B	1,250
Halibut	Coastwide	3,500

8.1.4. Stacking Licences

ITQ will automatically be reallocated to the initial rockfish licence designated to the vessel. Vessels may be designated with up to 8 inside rockfish licences, however, only one inside rockfish licence per vessel may hold ITQ.

8.2. Trip Limits

For some species of groundfish caught while hailed out on a directed rockfish fishing trip (Inside ZN) the following trip limits will apply:

Species	Trip Limit (pounds)	
Halibut	800	
Kelp Greenlings	Must be equal to or less than the total of Quillback, Copper, China, Tiger that is landed	
Lingcod (4B)	400	
Other Rockfish	Must be equal to or less than the total of Quillback, Copper, China, Tiger that is landed	
Pacific Cod	150	
Skate	50	
Sole and Flounder	No limit	
Bocaccio	Landings (round weight) per trip may not exceed:	
	100 pounds where 10,000 pounds or less of quota applicable rockfish is landed	100 pounds plus 1% of the amount of quota applicable rockfish landed in excess of 10,000 pounds, to a maximum of 600 pounds of Bocaccio

8.3. Fishing Restrictions for ITQ Excess Overages

Licences that exceed their total directed or non-directed species ITQ holdings by area by more than 10% or 100 pounds (whichever is greater) will be restricted from further fishing activity for the remainder of the fishing year, or until such time that sufficient ITQ is reallocated to the licence to cover any overages. Licences with catch that exceeds their annual ITQ species caps will be restricted from fishing for the remainder of the fishing season.

Licenses that do not reconcile excess overages by February 20, 2017, will carry excess overages into the new season (see section 6.6.2). If a licence remains in excess overage following initial allocations of ITQ, the licence will be restricted from fishing until temporary reallocations for the 2017/2018 season are processed in mid-March, 2017.

8.4. Reallocation of Directed and Non-Directed Species ITQ

The following guidelines for the reallocation of directed and non-directed species ITQ will be in effect for the 2016/2017 ZN fishery.

8.4.1. Subject to annual ITQ caps and sector caps, upon application, licence eligibility holders will be permitted to make unlimited temporary reallocations of directed

and non-directed species ITQs. A “Temporary Reallocation Request for Integrated Groundfish Fisheries” must be faxed to the GMU and, if approved, a licence amendment will be issued to reflect new ITQ amounts. The most current licence amendment must be onboard when fishing.

- 8.4.2. The 2016/2017 ZN licence must be issued prior to any ITQ being reallocated.
- 8.4.3. Request for temporary reallocation requests for the 2016/2017 season must be received by 16:00 hours Pacific Time on February 20, 2017 in order to be processed.
- 8.4.4. Requests for permanent reallocation of ITQ must be received by 16:00 hours local time on February 2, 2017 in order to be processed.
- 8.4.5. Permanent reallocations of ITQ will be expressed as a percentage of the TAC, and will be added to the receiving licence eligibility’s percentage of the TAC.
- 8.4.6. For permanent ITQ reallocations, the licence eligibility holder(s) of record must complete and sign a “Permanent Reallocation Request for Rockfish Inside IVQ.” For temporary reallocations of ITQ only one licence eligibility holder is required to sign the “Temporary Reallocation Request for Integrated Groundfish Fisheries” form.
- 8.4.7. ITQ that has already been caught or deemed “fished” cannot be reallocated.
- 8.4.8. The minimum quantity of ITQ that may be reallocated is one pound.
- 8.4.9. Temporary reallocations are only valid for the current fishing season.
- 8.4.10. Reallocations for the 2016/2017 season will not be processed until 8:00 hours local time March 15, 2016.

8.5. Rules for Carryover of ITQ Overage and Underage

8.5.1. Carryover of Directed and Non-Directed Species ITQ Underage

Licences will be permitted to carryover uncaught ITQ up to 10% of their total directed or non-directed species ITQ by area at the end of the 2016/2017 fishing season. This amount includes any reallocations made during the year. This amount will be added to the licence’s ITQ holdings in 2017/2018. Any amount above the 10% will be forgone.

8.5.2. Carryover of Directed and Non-Directed Species ITQ Overage

A licence’s catch may be up to 10% over the total directed or non-directed species ITQ (this amount includes any reallocations made during the year) or 100 pounds, whichever is greater. For the proper conservation and management of the resource, the amount of the overage will be deducted from the licence’s ITQ (by area) in the 2016/2017 fishing season and the overage will count against the annual ITQ caps for the following season.

9. DUAL FISHING

Dual fishing means fishing for commercial and First Nation Food, Social, and Ceremonial purposes on the same fishing trip. Dual fishing is authorized through licence conditions for commercial groundfish fisheries. Vessel masters considering dual fishing are responsible for reviewing their licence conditions to ensure they are aware of the dual fishing requirements.

Before hailing-out on a dual fishing trip, the vessel master must obtain a dual fishing designation certificate from a designating First Nation that has a communal licence authorizing the harvest of groundfish. The designation certificate must contain all of the information set out in the conditions of licence. If any of the information is missing the designation certificate will not be considered valid and the vessel master cannot dual fish. A designation certificate template is available on the DFO website: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.html>.

Aboriginal organizations may issue their own designation certificate as long as the required information is included.

When hailing-out, the vessel master must notify the hail service provider that they will be dual fishing, provide the name of the First Nation that issued the designation certificate, and provide the unique designation certificate identification number. The vessel master must carry the designation certificate on board the vessel at all times during the fishing trip.

All retained fish, including both commercial and FSC catch, must be recorded in the “retained” column of the Integrated Groundfish Fishing Logbook. Additionally, fish retained as FSC catch must be separated out and recorded by set and by species in the “comments” section of the Integrated Groundfish Fishing Logbook.

When hailing-in, the vessel master must provide an estimate, by species, of the weight of fish caught under the authority of the designation certificate. Unless the designating First Nation requests to have the FSC fish landed and validated at a different location, all fish from the trip must be landed at the same place and validated by a designated groundfish dockside observer. At the time of offload, the vessel master must provide a valid designation certificate to the dockside observer. If one is not provided, all catch from the trip will be considered commercial catch until the completion of a review by the Groundfish Management Unit and discussion with the vessel master. Furthermore, if FSC fish are landed at a different location than the commercial catch, an FSC validation record containing the verified weight and the number of pieces by species must be completed by a fisheries representative of the designating First Nation organization. The vessel master must obtain a copy of the FSC validation record and provide it to the designated groundfish dockside monitor at the time of the commercial offload.

10. CLOSURES

10.1. Strait of Georgia/Howe Sound Sponge Reef Closed Areas

In the spring of 2015 DFO implemented fisheries closures for all bottom contact gear to protect nine glass sponges reefs found with the Strait of Georgia. The closures include the reefs and a 150 meter buffer zone that will provide protection of the glass sponge reefs. The coordinates of the closures and an illustration of the reef locations are below. These closures

are the result of extensive consultation with First Nations, commercial and recreational interests and other stakeholders.

1. Howe Sound – “Defence Islands Closure”

Includes that portion of Subarea 28-4 that lies inside the area bounded by a line that:

begins at	49 34.102N	123 17.070W
then southerly to	49 33.730N	123 16.562W
then to	49 33.553N	123 16.462W
then to	49 33.438N	123 16.750W
then to	49 33.707N	123 17.201W
then to	49 33.993N	123 17.391W
thence back to the beginning point.		

2. Howe Sound – “Queen Charlotte Channels Closures” (4 closed areas)

Closure # 1: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 21.486N	123 17.254W
then southerly to	49 20.528N	123 17.690W
then to	49 20.401N	123 17.956W
then to	49 20.765N	123 18.794W
then to	49 20.982N	123 18.584W
then to	49 21.098N	123 18.037W
then to	49 21.501N	123 17.737W
thence back to the beginning point.		

Closure# 2: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 20.288N	123 17.693W
then southeasterly to	49 20.224N	123 17.501W
then to	49 19.993N	123 17.377W
then to	49 19.802N	123 17.444W
then to	49 19.720N	123 17.841W
then to	49 19.937N	123 18.107W
then to	49 20.288N	123 17.693W
thence back to the beginning point.		

Closure# 3: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 19.296N	123 19.905W
then southerly to	49 19.918N	123 19.847W
then to	49 19.307N	123 20.344W
then to	49 19.643N	123 20.421W
then to	49 19.819N	123 20.361W
then to	49 19.947N	123 20.097W
thence back to the beginning point.		

Closure# 4: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 20.637N	123 19.162W
then easterly to	49 20.577N	123 18.720W
then to	49 20.441N	123 18.637W
then to	49 20.068N	123 18.818W
then to	49 20.076N	123 19.135W
then to	49 19.718N	123 19.188W
then to	49 19.726N	123 19.514W
then to	49 20.259N	123 19.828W
thence back to the beginning point.		

3. Strait of Georgia “Foreslope Hills Closure”

Includes that portion of Subarea 29-3 that lies inside the area bounded by a line that:

begins at	49 09.634N	123 23.048W
then southerly to	49 09.389N	123 22.622W
then to	49 09.187N	123 22.587W
then to	49 09.211N	123 23.567W
then to	49 09.646N	123 23.543W
thence back to the beginning point.		

4. Strait of Georgia – “Outer Gulf Islands Closure” (4 closed areas)

Closure# 1: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 54.936N	123 19.589W
then southerly to	48 54.283N	123 18.529W
then to	48 54.114N	123 18.619W
then to	48 54.065N	123 18.771W
then to	48 54.787N	123 19.929W
then to	48 54.902N	123 19.793W
thence back to the beginning point.		

Closure# 2: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 52.588N	123 15.261W
then easterly to	48 52.520N	123 14.537W
then to	48 51.971N	123 13.768W
then to	48 51.795N	123 13.947W
then to	48 52.150N	123 14.444W
then to	48 52.038N	123 14.678W
then to	48 52.479N	123 15.521W
thence back to the beginning point.		

Closure# 3: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 51.602N	123 13.233W
then southerly to	48 51.309N	123 12.751W
then to	48 50.913N	123 12.938W
then to	48 50.8441N	123 13.059W
then to	48 51.1634N	123 13.662W
then to	48 51.579N	123 13.378W
thence back to the beginning point.		

Closure# 4: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 50.999N	123 12.391W
then southerly to	48 50.607N	123 11.603W
then to	48 50.097N	123 10.956W
then to	48 49.959N	123 11.182W
then to	48 50.857N	123 12.654W
then to	48 50.959N	123 12.566W
thence back to the beginning point.		

5. Strait of Georgia – “Gabriola Island Closure”

Includes that portion of Subarea 17-11 that lies inside the area bounded by a line that:

begins at	49 13.672N	123 47.577W
then southerly to	49 13.235N	123 47.429W
then to	49 13.185N	123 47.882W
then to	49 13.391N	123 48.119W
then to	49 13.623N	123 48.166W
thence back to the beginning point.		

6. Strait of Georgia – “Parksville Closure”

Includes those portions of Subareas 14-2 and 14-3 that lies inside the area bounded by a line that:

begins at	49 21.680N	124 19.762W
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then southeasterly to	49 21.514N	124 18.893W
then to	49 21.191N	124 17.723W
then to	49 21.064N	124 17.724W
then to	49 20.725N	124 18.380W
then to	49 21.432N	124 19.811W
thence back to the beginning point.		

7. Strait of Georgia – “East of Hornby Islands Closure”

Includes that portion of Subarea 14-6 that lies inside the area bounded by a line that:

begins at	49 33.490N	124 29.229W
then southerly to	49 32.701N	124 28.760W
then to	49 31.657N	124 29.434W
then to	49 31.663N	124 29.896W
then to	49 32.651N	124 29.752W
then to	49 33.340N	124 29.935W
then to	49 33.498N	124 29.773W
thence back to the beginning point.		

8. Strait of Georgia – “Sechelt Closure”

Includes that portion of Subarea 29-2 that lies inside the area bounded by a line that:

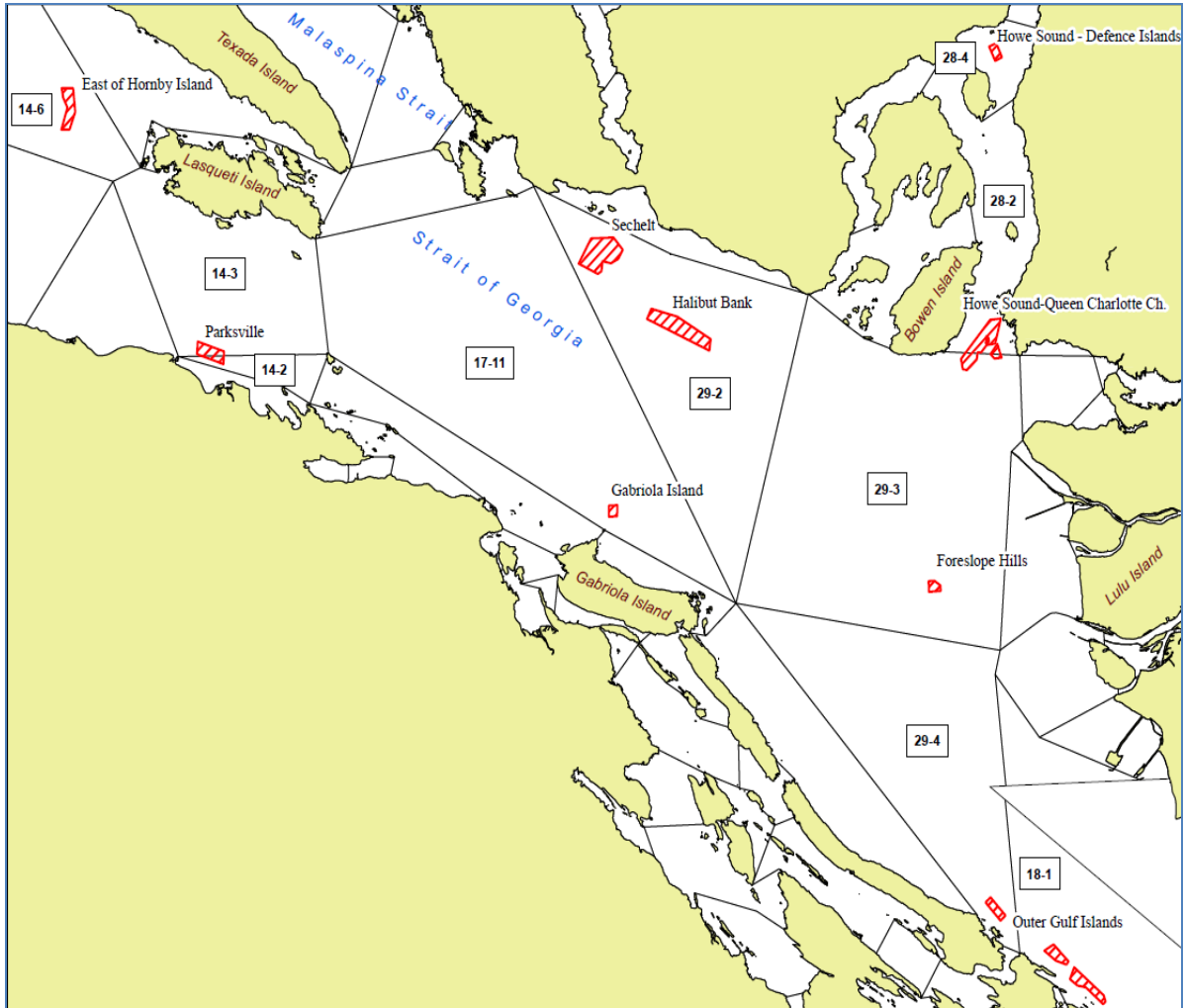
begins at	49 25.948N	123 48.889W
then easterly to	49 25.899N	123 47.266W
then to	49 25.373N	123 46.494W
then to	49 24.734N	123 47.083W
then to	49 24.910N	123 47.951W
then to	49 24.253N	123 48.283W
then to	49 24.845N	123 49.914W
thence back to the beginning point.		

9. Strait of Georgia – “Halibut Bank Closure”

Includes that portion of Subarea 29-2 that lies inside the area bounded by a line that:

begins at	49 21.768N	123 41.501W
then southerly to	49 21.174N	123 40.045W
then to	49 20.961N	123 40.139W
then to	49 20.803N	123 39.860W
then to	49 20.565N	123 40.182W
then to	49 21.610N	123 41.843W
then to	49 22.555N	123 44.456W
then to	49 22.188N	123 42.167W
then to	49 21.945N	123 42.087W
then to	49 21.673N	123 42.643W
then to	49 21.895N	123 43.908W
then to	49 22.174N	123 44.748W
thence back to the beginning point.		

Strait of Georgia Glass Sponge Reef Locations:



10.2. Rockfish Conservation Areas

Effective February 1, 2007 a suite of Rockfish Conservation Areas (RCAs) came into effect. Designation of the final 164 closed areas is a result of over three years of consultation with many stakeholders. Information on RCAs can be found on the Department's internet site at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/rca-acs/index-eng.html>.

10.3. Permanent Closures:

Area/Subarea	Rationale for Closure
13-2 to 13-9, 13-11 and 13-27	Closed to all commercial fishing.
14-11 and 14-14	Harbour areas.

Area/Subarea	Rationale for Closure
16-3 and 16-4	Harbour areas.
17-7 and 17-14	Harbour areas.
17-20 and 17-21	Protect shallow water environment.
18-8	Harbour areas.
19-1	Harbour areas.
19-6	Protect shallow water environment.
19-7 to 19-12	Designated sport-fishing area (open for dogfish only).
20-6 and 20-7	Harbour areas.
Area 28	Designated sport-fishing area.
29-7 to 29-17	Protect shallow water environment and Fraser River.

Appendix 5: Rockfish by Hook and Line (Outside ZN) Commercial Harvest Plan

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1. MANAGEMENT UPDATES & CHANGES FOR 2016/2017

1.1. In-Season Changes/Updates

In-season updates are available on the Fishery Notice website at: http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=commercial.

In-season Sector Catch and Sector Cap summaries are updated daily and can be found at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.htm>

1.2. Outside Yelloweye Rockfish rebuilding

Based on updated science information, application of DFO's *Fishery Decision-Making Framework Incorporating the Precautionary Approach*, and consultation with interested parties, the Department is pursuing catch reductions for the outside population of Yelloweye Rockfish in Groundfish Management Areas 3 and 5.

The Department will review the efficacy of catch reduction measures at the end of each fishing season and consider any additional measures necessary to support stock rebuilding. Please refer to conditions of licence and this harvest plan for further information.

1.3. Commercial Management and Allocation of Big and Longnose Skates

Consistent with the Department's direction of explicit and transparent allocations and to further promote stewardship of skate species, consultation between DFO and groundfish fishing interests were initiated in 2013 to (1) establish total allowable catches (TACs) for these species in areas 3 C/D, 5A/B and 5C/D/E (2) strengthen commercial management measures, and (3) establish a commercial allocation formula that apportions the commercial TAC among commercial fisheries. These changes were incorporated in the 2015/16 IFMP. DFO planned to progressively reduce TACs over a 2 year period for Longnose Skate in each area and Big Skate in Area 3 C/D to support management objectives on these stocks; the last of these reductions will be implemented in the 2016-17 season.

1.4. Quillback, Copper, China, and Tiger Rockfish quota management

In 2015/16, DFO piloted a tool allowing temporary conversion of limited amounts of Quillback quota into Copper, China, Tiger quota to accommodate different harvesting strategies of individual fishers while maintaining CCT catch within the TAC. Attempted implementation of the pilot program revealed technical challenges. Due to limited resources, DFO was unable to resolve these issues and the pilot has been discontinued.

1.5. National Online Licensing System (NOLS) - Licensing Services

Licensing System (NOLS) in the spring of 2013. This web-based system replaces in-person counter service at Pacific Fishery Licensing Units. All Fish harvesters/Licence Holders/vessel owners are now required to use the National Online Licensing System (NOLS) to view, pay for and print their commercial fishing licences, licence conditions and/or receipts.

Training materials, including step-by-step guides and a detailed user training manual, are available online (<http://www.dfo-mpo.gc.ca/FM-GP/SDC-CPS/licence-permis-eng.htm>) to guide users of the system in completing their licensing transactions. The Department also provides client support and assistance on how to use the system via e-mail at fishing-peche@dfo-mpo.gc.ca or by calling toll-free at 1-877-535-7307 (7:00 AM to 8:00 PM Eastern, Monday to Friday).

For more information on how to register and use the system, visit the Department's website [at the website address above](#), or contact our client support.

2. SPECIES

Rockfish (*Sebastes sp.*) and Longspine/Shortspine Thornyheads (*Sebastolobus sp.*)
Halibut (*Hippoglossus stenolepis*)
Lingcod (*Ophiodon elongates*)
Spiny Dogfish (*Squalus suckleyi*)
Sablefish (*Anoplopoma fimbria*)
Skate (*Rajidae*)
Sole and Flounder (*Pleuronectiformes* other than *Hippoglossus stenolepis*)
Pacific cod (*Gadus macrocephalus*)
Greenlings (*Hexagrammos sp.*)

3. GEAR

Fishing under a category ZN is permitted to occur by hook and line gear, specifically longline, jig, and troll.

4. OPEN TIMES

With the exception of those seasonal and permanent closures noted in this plan, or closures announced in-season, the Rockfish by Hook and Line (Outside ZN) fishery will be open from February 21, 2016 to February 20, 2017.

5. FISHING AREAS

Subject to those closures listed in Section 9, the outside management areas include: Areas 1 to 11, 21, 23 to 27, 101 to 111, 121, 123 to 127, 130, 142 and Subarea 12-14. Areas and Subareas are described in the *Pacific Fishery Management Area Regulations, 2007*.

6. LICENSING

6.1. Licence Category

A commercial rockfish category ZN or a communal commercial category FZN licence is limited entry and party based.

6.2. Licence Renewal Fees

The commercial rockfish licence renewal fee is \$100 annually.

6.3. Licence Application and Issuance

Renewal of a Category ZN licence and payment of the fees must be done on an annual basis to retain the privilege to be issued the licence in the future, regardless of whether or not fishing is carried out. Those category L licenses not renewed by February 20, 2017 will cease and licence issuance requests will be unable to be considered in future.

Prior to annual licence issuance of a communal commercial licence, licence eligibility holders are required to annually designate the fishing vessel to hold the licence. This must be done by navigating to the 'Submit a Request' menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>).

To avoid delays, please ensure the payment, vessel designation and option information is submitted all at the same time through the Submit a Request menu selection within the NOLS.

Vessels may not be designated with more than one 'Outside rockfish' licences during a season.

Prior to annual licence issuance, licence eligibility holders are required to:

- a) Meet any Ministerial conditions placed on licence eligibility.
- b) Indicate through the National Online Licensing System if you do not intend to harvest under the authority of the rockfish licence eligibility in 2016.
- c) Ensure any conditions of the previous year's licence are met.
- d) Designate a registered commercial fishing vessel that is eligible for any vessel based licence (i.e.) salmon, schedule II species, geoduck, Sablefish, Halibut, crab, shrimp by trawl and prawn and shrimp by trap, a valid communal commercial licence or a valid

salmon category N licence through the National Online Licensing System. Designated vessels may not exceed the maximum vessel length (MVL) of the licence designated.

6.4. Licence Options

The designated vessel may not exceed the Maximum Vessel Length (MVL) of the outside rockfish licence designated, even when an initial inside rockfish licence has already been designated; unless the option to not participate in the directed ZN fishery is made at the time of licence issuance.

Should the licence holder select the option to not participate in the directed ZN fishery, the designated vessel may exceed the MVL of the rockfish licence eligibility. The designated vessel will then reallocate rockfish quota to other licence eligibilities.

If the selection has been made to not participate in the directed rockfish fishery at the beginning of the season, the licence holder may choose to change to the option to participate at a later date, as long as the vessel meets all the length requirements, where applicable.

Option selection for each rockfish licence may be done by navigating to the 'Submit a Request' menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>).

6.5. Licence Amendments

Prior to commencing to harvest under the authority of a rockfish licence the licence eligibility holder or an authorized representative must request and receive a 2016/2017 licence amendment from the Groundfish Management Unit.

Licence Amendment Request Forms and all applicable forms are available online at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.html>.

6.6. Licence Documents

Rockfish licence documents are valid from the date of issue to February 20, 2017.

Replacements for lost or destroyed licence documents may be obtained by reprinting the licence documents through the licence holders account via the National Online Licensing System.

6.7. Vessel Redesignations

Redesignation of rockfish licences is permitted at any time during the year, provided that all Conditions of Licence has been met (i.e. completion, submission and acceptance by GMU of logbooks).

The Application for Category Z Vessel Redesignation form is available online at <http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/licence-commercial-eng.html> or by

contacting the PFLU by phone at 1-877-535-7307 or via e-mail at fishing-peche@dfo-mpo.gc.ca.

Prior to a redesignation being processed, licence eligibility holders must:

- Confirm that the conditions of licence have been met (e.g. log book or fish slips submitted, etc.) E.g. if a licence was issued on January 15th and a request to redesignate is received on March 10th then logs and sales slips are required to be submitted up to March 10.
- Designate a registered Canadian commercial vessel.
- Ensure the designated vessel holds a vessel based licence eligibility (as listed above) and does not exceed the Maximum Vessel Length (MVL) of the licence eligibility to be redesignated. For category FZN licence eligibilities the designated vessel must meet the established length restrictions.

Once the redesignation form has been completed, the form must be submitted through the 'Submit a Request' menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>).

6.8. Licence Eligibility Nominations

Rockfish category ZN licence eligibilities may be nominated from one party to another. Licence eligibility holders may indicate their intention to no longer apply for a rockfish licence by completing a nomination form provided by Fisheries and Oceans Canada. Where such an intention is stated, the Minister may consider issuance of the licence to a person nominated by the previous licence eligibility holder.

The Nomination for Category Z Licence Eligibility form is available online at <http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/licence-commercial-eng.html> or by contacting the Pacific Fishery Licence Unit by phone at 1-877-535-7307 or via e-mail at fishing-peche@dfo-mpo.gc.ca.

Communal commercial rockfish category FZN licence eligibilities may not be nominated as these are allocated annually to First Nation groups.

7. BAIT

Commercial fishers wishing to use licensed catch as bait may do so, with the exception of rockfish. All such catch must be accurately recorded in the Integrated Groundfish Fishing Log. Rockfish may not be used as bait, and must be retained and landed.

Octopus caught incidentally may be retained and used for bait under authority of a Rockfish licence eligibility, but cannot be landed and sold.

If a quota species is used as bait, the vessel will be assessed an average weight for that species as defined in Appendix 2 of the IFMP.

8. RESEARCH ALLOCATION

To support rockfish research the Groundfish Hook and Line Sub Committee (GHLSC) has agreed to set aside five percent of the allocations for research purposes.

The following table indicates the 2016/2017 outside rockfish research allocation:

Species/Aggregate	Quota (tonnes)
Yelloweye rockfish	6
Quillback rockfish	5
Copper, China and Tiger rockfish	2
Silvergray rockfish	10
Canary rockfish	6
Redbanded rockfish	11
Rougheye rockfish	20
Shortraker rockfish	4
Yellowmouth rockfish	3
Yellowtail rockfish	2
Shortspine Thornyheads	1

9. ROCKFISH INDIVIDUAL TRANSFERABLE QUOTAS (ITQ)

9.1. Annual ITQ Caps

9.1.1. TAC Holdings Permanent Quota Caps

All ZN Outside licences will have annual ITQ caps for permanent quota. The total amount of permanent reallocations of quota may not exceed the quota caps listed below.

Species	Areas	TAC Holdings Cap (pounds)
Yelloweye rockfish	3C/D, 5A	1,329
	5B	688
	5C/D	742
	5E	860
Quillback rockfish	3C/D, 5A	2,488
	5B	1,629
	5C/D	1,824
	5E	371
Copper, China and	3C/D, 5A	1,401

Species	Areas	TAC Holdings Cap (pounds)
Tiger rockfish	5B	382
	5C/D	1,123
	5E	28
Canary rockfish	3C/D	1,071
	5A/B	1,831
	5C/D	848
	5E	885
Silvergray rockfish	3C/D	2,373
	5A/B	4,630
	5C/D	4,202
	5E	2,733
Shortraker rockfish	Coastwide	5,874
Redbanded rockfish	Coastwide	10,529
Rougheye rockfish	Coastwide	26,031
Shortspine Thornyhead	Coastwide	980
Big skate	Coastwide	300
Longnose skate	Coastwide	1,000

9.1.2. Licence Species Temporary and Permanent Quota Caps (Directed Species)

All ZN licences will have annual ITQ caps for some of their directed and non-directed catch. Temporary and permanent reallocations combined up to the species caps listed below will be a permitted.

Species	Areas	Licence Species Cap (pounds)
Canary rockfish	Coastwide	10,000
Redbanded rockfish	Coastwide	80,000
Rougheye rockfish	Coastwide	200,000
Silvergray rockfish	Coastwide	30,000
Shortraker rockfish	Coastwide	100,000
Shortspine Thornyhead	Coastwide	10,000
Quillback,	Coastwide	22,500
China, Copper and Tiger rockfish	Coastwide	15,000
Yelloweye rockfish	Coastwide	10,000

9.1.3. Quota Holdings Caps (Non-Directed Species)

Species	Areas	Licence Species Cap (pounds)
Dogfish	Coastwide	100,000
Sablefish	Coastwide	15,000
Big skate	Coastwide	2,000
Longnose	Coastwide	2,000

9.1.4. Quota Landings Caps (Non-Directed Species)

Species	Areas	Quota Landings Cap (pounds)				
Halibut	Coastwide	7,500 lbs if < 20,000 lbs of quota rockfish landed	10,000 lbs if between 20,000- 40,000 lbs of quota rockfish landed	15,000 lbs if between 40,000- 60,000 lbs. of quota rockfish landed	20,000 lbs if > 60,000 lbs of quota rockfish landed	
Lingcod	Coastwide	5,000 lbs if < 8,000 lbs of quota rockfish landed	10,000 lbs if between 8,000- 20,000 lbs of quota rockfish landed	15,000 lbs if between 20,000- 40,000 lbs of quota rockfish landed	20,000 lbs if between 40,000- 60,000 lbs of quota rockfish landed	25,000 lbs if > 60,000 lbs of quota rockfish landed
Sablefish	Coastwide	5,000 lbs if < 20,000 lbs of quota rockfish landed	10,000 lbs if between 20,000- 40,000 lbs of quota rockfish landed	15,000 lbs if > 40,000 lbs of quota rockfish landed		

9.2. Trip Limits

For some species of groundfish caught while fishing Rockfish by Hook and Line (Outside ZN) fishery there will be trip limits:

Species	Trip Limit (pounds)	
Black Rockfish	1,000	
Kelp Greenlings	500	
Other Rockfish	5,000	
Pacific Cod	500	
Sole and Flounder	No limit	
Bocaccio	Landings (round weight) per trip may not exceed:	
	100 pounds where 10,000 pounds or less	100 pounds plus 1% of the amount of quota applicable rockfish landed in excess of

Species	Trip Limit (pounds)	
	of quota applicable rockfish is landed	10,000 pounds, to a maximum of 600 pounds of Bocaccio

9.3. Fishing Restrictions for ITQ Excess Overage

Licences that exceed their total directed or non-directed species ITQ holdings by area by more than 30% or 100 pounds (whichever is greater) will be restricted from further fishing activity for the remainder of the fishing year, or until such time that sufficient ITQ is reallocated to the licence to cover any overages. Licences with catch that exceeds their annual ITQ species caps will be restricted from fishing for the remainder of the fishing season.

Licenses that do not reconcile excess overages by February 20, 2017, will carry excess overages into the new season (see section 7.6.2). If a licence remains in excess overage following initial allocations of ITQ, the licence will be restricted from fishing until temporary reallocations for the 2016/2017 season are processed in mid-March, 2016.

9.4. Reallocation of Directed and Non-Directed Species ITQ

The following guidelines for the reallocation of directed and non-directed species ITQ will be in effect for the 2016/2017 ZN fishery.

- 9.4.1. Subject to annual ITQ caps and sector caps, upon application, licence eligibility holders will be permitted to make unlimited temporary reallocations of directed and non-directed species ITQs. A “Temporary Reallocation Request for Integrated Groundfish Fisheries” form must be completed and submitted to the GMU and, if approved, a licence amendment will be issued to reflect new ITQ amounts. The most current licence amendment must be onboard when fishing.
- 9.4.2. The 2016/2017 ZN licence must be issued prior to any ITQ being reallocated.
- 9.4.3. Request for temporary reallocation requests for the 2016/2017 season must be received by 16:00 hours Pacific Time on February 20, 2017 in order to be processed.
- 9.4.4. For permanent ITQ reallocations, licence eligibility holder(s) of record must complete and sign a “Permanent Reallocation Request for Integrated Groundfish Fisheries.” For temporary reallocations of ITQ only one licence eligibility holder is required to sign the “Temporary Reallocation Request for Integrated Groundfish Fisheries” form.
- 9.4.5. Requests for permanent reallocation of ITQ must be received by 16:00 hours local time on February 2, 2017 in order to be processed.
- 9.4.6. Permanent reallocations of ITQ will be expressed as a percentage of the TAC, and will be added to the receiving licence eligibility’s percentage of the TAC.

- 9.4.7. ITQ that has already been caught or deemed “fished” cannot be reallocated.
- 9.4.8. The minimum quantity of ITQ that may be reallocated is one pound.
- 9.4.9. Temporary reallocations are only valid for the current fishing season.
- 9.4.10. Reallocations for the 2016/2017 season will not be processed until 8:00 hours local time March 15, 2017.

9.5. Rules for Carryover of ITQ Overage and Underage

9.5.1. Carryover of Directed and Non-Directed Species ITQ Underage

Licences will be permitted to carryover uncaught ITQ up to 30% of their total directed or non-directed species (except Sablefish and dogfish) ITQ by area at the end of the 2016/2017 fishing season. This amount includes any reallocations made during the year. This underage poundage will be added to the licence’s ITQ holdings in 2017/2018. Any amount above the 30% will be forgone.

For Sablefish, licences will be permitted to carryover uncaught ITQ up to 15% of their Sablefish ITQ by area at the end of the 2016/2017 fishing season. This amount includes any reallocations made during the year. This underage poundage will be added to the licence’s ITQ holdings in 2017/2018. Any amount above the 15% will be forgone.

For dogfish, licences will be permitted to carryover uncaught ITQ up to 10% of their dogfish ITQ by area at the end of the 2016/2017 fishing season. This amount includes any reallocations made during the year. This underage poundage will be added to the licence’s ITQ holdings in 2017/2018. Any amount above the 10% will be forgone.

9.5.2. Carryover of Directed and Non-Directed Species ITQ Overage

A licence’s catch may be up to 30% over the total directed or non-directed species ITQ (this amount includes any reallocations made during the year) or 100 pounds, whichever is greater. For the proper conservation and management of the resource, the amount of the overage will be deducted from the licence’s ITQ in the 2017/2018 fishing season and the overage will count against the annual ITQ caps for the following season.

10. DUAL FISHING

Dual fishing means fishing for commercial and First Nation Food, Social, and Ceremonial purposes on the same fishing trip. Dual fishing is authorized through licence conditions for commercial groundfish fisheries. Vessel masters considering dual fishing are responsible for reviewing their licence conditions to ensure they are aware of the dual fishing requirements.

Before hailing-out on a dual fishing trip, the vessel master must obtain a dual fishing designation certificate from a designating First Nation that has a communal licence authorizing the harvest of

groundfish. The designation certificate must contain all of the information set out in the conditions of licence. If any of the information is missing the designation certificate will not be considered valid and the vessel master cannot dual fish. A designation certificate template is available on the DFO website: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/groundfond/index-eng.html>.

Aboriginal organizations may issue their own designation certificate as long as the required information is included.

When hailing-out, the vessel master must notify the hail service provider that they will be dual fishing, provide the name of the First Nation that issued the designation certificate, and provide the unique designation certificate identification number. The vessel master must carry the designation certificate on board the vessel at all times during the fishing trip.

All retained fish, including both commercial and FSC catch, must be recorded in the “retained” column of the Integrated Groundfish Fishing Logbook. Additionally, fish retained as FSC catch must be separated out and recorded by set and by species in the “comments” section of the Integrated Groundfish Fishing Logbook.

When hailing-in, the vessel master must provide an estimate, by species, of the weight of fish caught under the authority of the designation certificate. Unless the designating First Nation requests to have the FSC fish landed and validated at a different location, all fish from the trip must be landed at the same place and validated by a designated groundfish dockside observer. At the time of offload, the vessel master must provide a valid designation certificate to the dockside observer. If one is not provided, all catch from the trip will be considered commercial catch until the completion of a review by the Groundfish Management Unit and discussion with the vessel master. Furthermore, if FSC fish are landed at a different location than the commercial catch, an FSC validation record containing the verified weight and the number of pieces by species must be completed by a fisheries representative of the designating First Nation organization. The vessel master must obtain a copy of the FSC validation record and provide it to the designated groundfish dockside monitor at the time of the commercial offload.

11. CLOSURES

11.1. Rockfish Conservation Areas

Effective February 1, 2007 a suite of Rockfish Conservation Areas (RCAs) came into effect. Designation of the final 164 closed areas is a result of over three years of consultation with many stakeholders. Information on RCAs can be found on the Department's internet site at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/rca-acs/index-eng.htm>.

11.2. Gwaii Haanas National Marine Conservation Area

Commercial and recreational fishers and harvesters are reminded that extraction of any kind (e.g., fishing, kelp harvest) is not permitted in the areas of the National Marine Conservation Area described below:

11.2.1. Burnaby Narrows

Those waters of Subareas 2-13 and 2-16 inside a line:

commencing at	52°23.049 N	131°23.438 W
then east to	52°23.077 N	131°22.908 W
following the southern shoreline of Kat Island east to	52°23.107 N	131°22.274 W
then east to	52°23.295 N	131°21.34 W
following the western shoreline of Burnaby Island south to	52°20.951 N	131°20.509 W
then west to	52°20.733 N	131°21.072 W
then north following the eastern shoreline of Moresby Island back to the point of commencement.		

11.2.2. Louscoone Estuary

Those waters of Subareas 2-33 and 2-34 north of a line:

drawn from	52°11.836 N	131°15.658 W
then true east to	52°12.271 N	131°14.594 W

11.2.3. Flamingo Estuary

Those waters of Subarea 2-37 north of a line:

drawn from	52°14.456 N	131°22.234 W
then southeast to	52°14.246 N	131°21.489 W

11.2.4. Gowgaia Estuary

Those waters of Subarea 2-41 east of a line:

drawn from	52°24.944 N	131°32.138 W
then southeast to	52°24.238 N	131°32.024 W

11.2.5. Cape Saint James

Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line:

commencing at	51°56.523 N	131°01.522 W
then southwest to	51°55.627 N	131°02.574 W
then southeast to	51°52.5 N	130°57.919 W
then south to	51°51.676 N	130°57.805 W
then southeast to	51°50.349 N	130°56.442 W
then northeast to	51°51.062 N	130°54.717 W
then north to	51°53.888 N	130°55.608 W
then northwest to	51°58.671 N	130°59.464 W
then west to	51°58.743 N	131°00.606 W
and then following the southern shore of Kungit Island to the point of commencement.		

11.2.6. SGang Gwaay

Those waters of Subareas 2-31 and 142-1

inside a 3 km radius from the centre
point on Anthony Island located at: 52°05.655 N 131°13.178 W

For more background information on the National Marine Conservation Area please see IFMP section 8.2.

11.3. Year-Round Closures

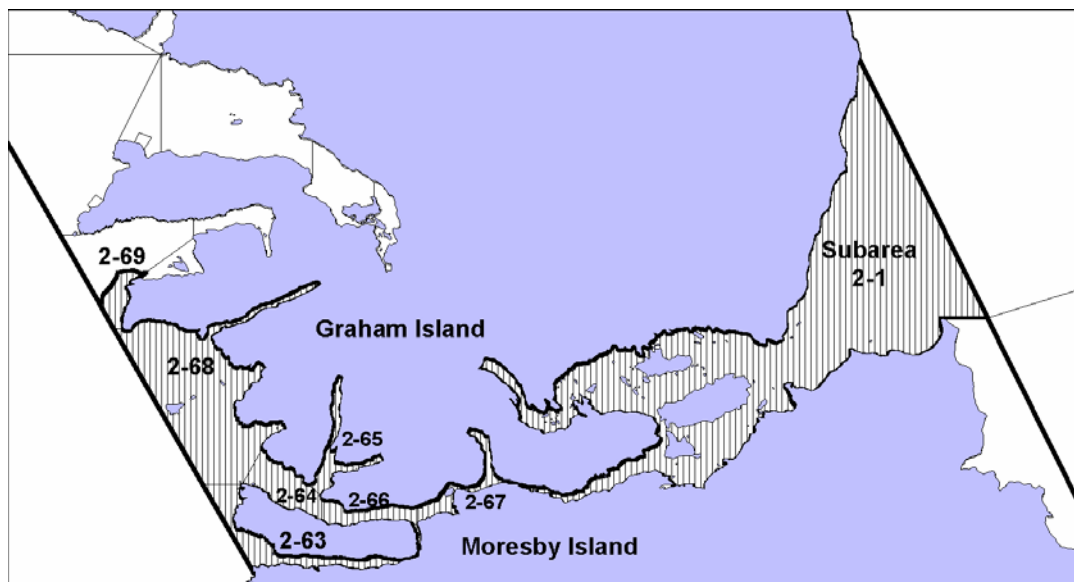
The following areas will be closed February 21, 2016 to February 20, 2017 to reduce harvesting pressure and provide improved access for First Nations food, social and ceremonial purposes.

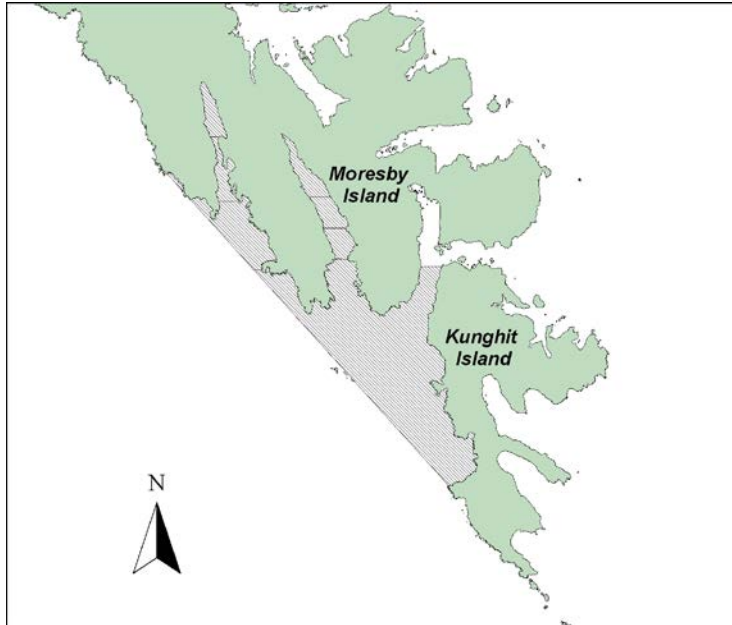
11.3.1. Haida Gwaii

Subareas 2-1, 2-31 to 2-37, 2-63 to 2-68; and that portion of Subarea 2-69 from Hunter Point to Fame Point shoreward of the coordinates laid out below. These areas are closed year round for all commercial groundfish fisheries. The intent of the closure is to reduce harvesting pressure on localized stocks of fish and to provide improved access for First Nations food, social and ceremonial purposes.

Subarea 2-69:

The portion of Subarea 2-69 inside a line:		
that begins at Fame Point	53°17.060' N	132°42.415' W
then to	53°17.060' N	132°43.800' W
then to	53°16.350' N	132°44.700' W
then abutting the boundary of 2-68	53°15.208' N	132°43.597' W
Then to Hunter Point	53°15.208' N	132°42.984' W



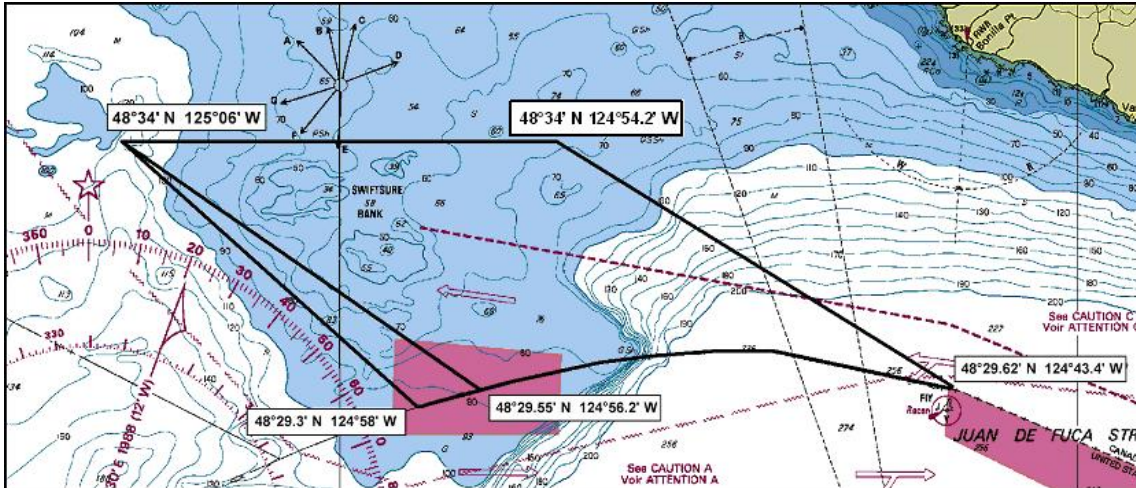


11.3.2. Swiftsure Commercial

Those portions of Subareas 121-1 and 121-2 inside a line:
that begins at 48°34.0' N 125°06.0' W
then true east to 48°34.0' N 124°54.2' W
then to 48°29.62' N 124°43.4' W
then following the International
Boundary between Canada and the
United States of America to 48°29.3' N 124°58.0' W
then to the beginning point.

11.3.3. Swiftsure Recreational

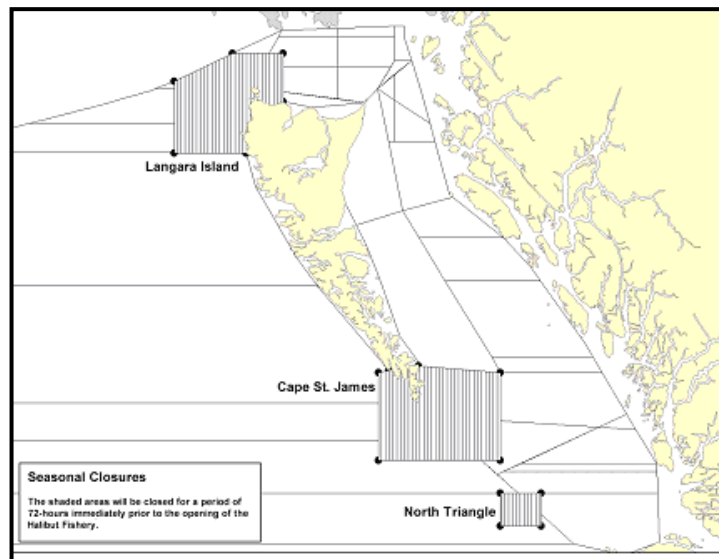
Those portions of Subareas 121-1 and 121-2 inside a line:
that begins at 48°34.0' N 125°06.0' W
then true east to 48°34.0' N 124°54.2' W
then to 48°29.62' N 124°43.4' W
then following the International
Boundary between Canada and the
United States of America to 48°29.55' N 124°56.2' W
then to the beginning point.



11.4. Seasonal Closures

These closures go into effect 72 hours prior to the halibut opening each year for all commercial hook and line fishing vessels. Their intent is to ensure a fair and orderly opening for the Halibut fishery.

Coast-wide Map of 72-Hour “Halibut Opening” Closure



Those portions of Area 101 that are:
east of the meridian passing through 134°00.0' west longitude;
west of the meridian passing through 132°40.0' west longitude; and
south of the parallel passing through 54°30.0' north latitude.

Those portions of Subareas 102-2, 102-3, 108-2, 130-2, 130-3 and 142-1 that are inside a line that:

that begins at	52°11.0' N	131°22.16' W
then westerly to	52°10.0' N	131°30.0' W
then true south to	51°30.0' N	131°30.0' W

then true east to	51°30.0' N	130°00.0' W
then true north to	52°10.0' N	130°00.0' W
then westerly to	52°13.0' N	131°00.3' W

Those portions of Area 111 and Subarea 130-1 that lie inside a line that:

begins at	51°15.0' N	130°00.0' W
then true east to	51°15.0' N	129°30.0' W
then true south to	51°00.0' N	129°30.0' W
then true west to	51°00.0' N	130°00.0' W

then true north to the beginning point.

Appendix 6: Halibut Commercial Harvest Plan

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1. MANAGEMENT UPDATES & CHANGES FOR 2016/2017

1.1. In-Season Changes/Updates

In-season updates are available on the Fishery Notice website at: http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=commercial.

In-season Sector Catch and Sector Cap summaries are updated daily and can be found at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.htm>

1.2. Outside Yelloweye Rockfish rebuilding

Based on updated science information, application of DFO's *Fishery Decision-Making Framework Incorporating the Precautionary Approach*, and consultation with interested parties, the Department is pursuing catch reductions for the outside population of Yelloweye Rockfish in Groundfish Management Areas 3 and 5.

The Department will review the efficacy of catch reduction measures at the end of each fishing season and consider any additional measures necessary to support stock rebuilding. Please refer to conditions of licence and this harvest plan for further information.

1.3. Commercial Management and Allocation of Big and Longnose Skates

Consistent with the Department's direction of explicit and transparent allocations and to further promote stewardship of skate species, consultation between DFO and groundfish fishing interests were initiated in 2013 to (1) establish total allowable catches (TACs) for these species in areas 3 C/D, 5A/B and 5C/D/E (2) strengthen commercial management measures, and (3) establish a commercial allocation formula that apportions the commercial TAC among commercial fisheries. These changes were incorporated in the 2015/16 IFMP. DFO planned to progressively reduce TACs over a 2 year period for Longnose Skate in each area and Big Skate in Area 3 C/D to support management objectives on these stocks; the last of these reductions will be implemented in the 2016-17 season.

1.4. Quillback, Copper, China, and Tiger Rockfish quota management

In 2015/16, DFO piloted a tool allowing temporary conversion of limited amounts of Quillback quota into Copper, China, Tiger quota to accommodate different harvesting strategies of individual fishers while maintaining CCT catch within the TAC. Attempted implementation of the pilot program revealed technical challenges which DFO was unable to resolve. The pilot has been discontinued.

1.5. National Online Licensing System (NOLS) Client Support - Licensing Services

All fish harvesters/Licence Holders/vessel owners are now required to use the National Online Licensing System (NOLS) to view, pay for and print their commercial fishing licences, licence conditions and/or receipts.

Training materials, including step-by-step guides and a detailed user training manual, are available online (<http://www.dfo-mpo.gc.ca/FM-GP/SDC-CPS/licence-permis-eng.htm>) to guide users of the system in completing their licensing transactions. The Department also provides client support and assistance on how to use the system via e-mail at fishing-peche@dfo-mpo.gc.ca or by calling toll-free at 1-877-535-7307 (7:00 AM to 8:00 PM Eastern, Monday to Friday).

For more information on how to register and use the system, visit the Department's website at the address above, or contact our client support.

2. SPECIES

The following species are permitted to be retained under Part 1 and Schedule II, Part 2 of a valid Halibut licence eligibility with the appropriate amendment.

Halibut (*Hippoglossus stenolepis*)

Rockfish (*Sebastes spp. and Sebastolobus spp.*)

Lingcod (*Ophiodon elongates*)

Spiny Dogfish (*Squalus suckleyi*)

Sablefish (*Anoplopoma fimbria*)

Skate (*Rajidae*)

Sole and Flounder (*Pleuronectiformes*, other than *Hippoglossus stenolepis*)

Pacific cod (*Gadus macrocephalus*)

3. GEAR

Hook and line gear.

No longline gear shall be left set and/or unattended during a vessel's return to port. Vessel masters shall retrieve, and have on board, all longline gear prior to delivering their catch to port.

4. QUOTAS AND OPEN TIMES

4.1. Open Times

The 2016 Halibut fishery will commence at 12:00 hours, March 19, 2016 and will close at 12:00 hours, November 7, 2016. Following the closure of the fishery, all fish caught under the authority of a Halibut licence eligibility, must be landed and validated by a DFO-designated groundfish dockside observer no later than 12:00 hours, November 14, 2016.

To allow an orderly opening for the 2016 Pacific Halibut season, variation orders are issued to close three areas (Langara Island, Cape St. James, and North Triangle) for 72 hours prior to the opening of the Pacific Halibut season. The variation orders close the fisheries Skate, Sole, Flounder and Spiny Dogfish by Hook and Line, Pacific Cod by Hook and Line, Rockfish by Hook and Line, and Sablefish by Longline. Please review all variation orders prior to fishing.

The retention of Lingcod by hook and line gear will be permitted from April 1 to 23:59 hours November 14, 2016. Accordingly, all Lingcod must be landed and validated by a DFO-designated groundfish dockside observer no later than 23:59 hours, November 21, 2016.

4.2. Fishing Areas

Subject to closures described in section 11 of this harvest plan and variation orders, the waters in which commercial Halibut fishing is permitted to be carried out are:

Areas 1 to 11, 21, 23 to 27, 101 to 111, 121, 123 to 127, 130, 142, Subarea 12-14, (Groundfish Management Areas 3C, 3D, 5A, 5B, 5C, 5D, and 5E).

To harvest Pacific Halibut in subareas 12-1 to 12-13, 12-15 to 12-48, 19-3 to 19-5 and Area 20 (Groundfish Management Area 4B), an amendment to the Halibut conditions of licence is required from the Halibut Coordinator; please see section 6.1 of this harvest plan.

Subject to variations orders, while fishing only under authority of a Halibut licence eligibility legal-sized Sablefish may be retained from any area or subarea open to fishing under the authority of a Halibut commercial licence eligibility, except Groundfish Management Area 4B.

When hailed out on a combination Halibut and Sablefish trip, a vessel can only fish in areas open to directed Sablefish fishing (see section 8 of this harvest plan).

4.3. Commercial and Recreational Total Allowable Catch

For 2016, the International Pacific Halibut Commission (IPHC) recommended a Canadian commercial and recreational catch limit of 3,311.23 tonnes (all Halibut weights are fresh, dressed, head-off weight) for IPHC regulatory area 2B, Canada's Pacific waters.

For commercial/recreational allocation purposes, the total allowable catch (TAC) was adjusted to 3,435.06 tonnes to include recreational wastage, and commercial wastage of fish over 66 cm in length from the previous year (totalling 123.83 tonnes). Wastage is

defined as the incidental mortality from the directed fisheries due to regulatory discards, mandatory or voluntary release of halibut, and from lost or abandoned fishing gear. The amount of commercial and recreational wastage is estimated annually via the IPHC stock assessment process. The adjusted TAC is allocated between the commercial (85%) and the recreational (15%) fisheries, and the commercial and recreational wastage is removed from the commercial and recreational allocations, respectively.

Section 10 of the Fisheries Act permits the Minister of Fisheries and Oceans to allocate fish for the purpose of financing scientific and fisheries management activities. In 2016 up to 27.22 tonnes of Halibut has been notionally allocated from the commercial TAC to support (1) a synoptic longline survey, and (2) an additional technician on the IPHC setline survey in IPHC regulatory area 2B through a joint project agreement between the Pacific Halibut Management Association of BC and the Department.

In 2016 the Halibut TAC (fresh, dressed, head-off weight) has been allocated as:

Food, Social, and Ceremonial*	183.71 tonnes	405,000 pounds
Use of Fish allocation for longline synoptic survey and IPHC survey technician	27.22 tonnes	60,000 pounds
Commercial TAC **	2,784.63 tonnes	6,139,050 pounds
Recreational TAC	499.38 tonnes	1,100,950 pounds
Total Allowable Catch ***	3,494.93 tonnes	7,705,000 pounds

* Excludes treaty allocations relinquished from the commercial TAC totalling 13.63 tonnes.

** Includes treaty allocations relinquished from the commercial TAC totalling 13.63 tonnes. These treaty allocations are not available to the commercial fishery.

*** Excludes carryover of overages and underages from the previous season (see section 6.7 of this harvest plan). Excludes permitted Halibut mortality from the groundfish Trawl fishery (see appendix 8 of the IFMP).

5. LICENSING

5.1. Licence Category

A commercial Halibut category L or communal commercial Halibut category FL licence eligibility is required to participate in the directed commercial Pacific Halibut fishery.

Category L Halibut eligibilities are limited entry and vessel-based. Category FL eligibilities are limited entry and party-based; a First Nations group is the licence eligibility holder and the eligibility must be designated to a commercially registered fishing vessel that meets established length restrictions.

Vessels authorized to fish under the authority of a Halibut licence eligibility are also permitted to catch and retain other groundfish species by hook and line gear as outlined in conditions of licence. These vessels are also permitted to catch and retain species described in Schedule II, Part 2 of the *Pacific Fishery Regulations*, 1993, catch and retain other groundfish species, transport non-groundfish species caught by other vessels and be designated to fish under the authority of a category Z licence.

5.2. Licence Renewal Fees

The commercial Halibut licence renewal fee is based on the following formula: \$310 multiplied by the number of tonnes of Halibut initially allocated to the licence eligibility, less 40 percent of that product, up to a maximum reduction of \$1000. There is no annual licence renewal fee for communal commercial category FL licences.

5.3. Licence Application and Issuance

Renewal of a Category L licence and payment of the fees must be done on an annual basis to retain the privilege to be issued the licence in the future, regardless of whether or not fishing is carried out. Those category L licenses not renewed by February 20, 2017 will cease and licence issuance requests will be unable to be considered in future.

Prior to annual licence issuance of a communal commercial licence, licence eligibility holders are required to annually designate the fishing vessel to hold the licence. This must be done by navigating to the ‘Submit a Request’ menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>).

Prior to annual licence issuance, vessel owners/licence eligibility holders are required to:

- a) Meet any Ministerial conditions placed on the licence eligibility.
- b) Ensure any conditions of the previous year’s licence are met.

5.4. Licence Amendment

The Halibut licence eligibility must be issued prior to the processing of a request for licence amendment or reallocation of ITQ. The vessel owner/master must have on board a valid Halibut licence amendment prior to fishing.

This amendment outlines the total amount of fish by species that the vessel can land for the fishing season. Without this amendment the vessel is not permitted to catch, retain or land any fish.

A “Request for Licence Amendment” must be completed by the vessel owner/licence eligibility holder or the designated agent and faxed to the Groundfish Management Unit at (604) 666-8525. Request forms and all other applicable forms are available online at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/form-eng.htm>

5.5. Licence Documents

Halibut licence eligibilities are valid from the date of issue to February 20, 2017.

Replacements for lost or destroyed licence documents may be obtained by reprinting the licence documents through the NOLS.

5.6. Vessel Replacement

The owner(s) of a category L licensed Halibut vessel may make an application to replace the commercial fishing vessel. Both the replacement vessel and the vessel being replaced must have a survey on file with the Pacific Fishery Licence Unit (PFLU) or submitted with the vessel replacement application. Vessels must be surveyed according to the Department guidelines.

Communal commercial licenses are not eligible for vessel replacement as the licence eligibility is party based.

A single category L Halibut licence eligibility may be placed on a vessel that does not hold another vessel based licence eligibility up to the overall length (OAL) of the original vessel, the vessel licensed as at January 31, 1993.

A single category L Halibut licence eligibility may be placed on a vessel that does hold another vessel based licence eligibility, up to the maximum vessel length (MVL) of the Halibut licence eligibility; the MVL being the length of the original vessel licensed as at January 31, 1993, plus 25 feet.

A single category L Halibut licence eligibility may be placed on a vessel that does not hold another vessel based licence eligibility as long as the replacing vessel does not exceed the overall length of the existing vessel.

In circumstances where the intention is to make the category L licence eligibility a standalone licence and the replacing vessel has a category C, Schedule II species licence eligibility, the C licence eligibility is relinquished (permanently retired), except when the placement is temporary, then the C licence eligibility is held until the Halibut licence eligibility is permanently placed on a vessel. The option of relinquishing a schedule II species licence may only be utilized when it is the intention to separate a halibut licence from a married situation in order to become a standalone halibut licence.

When a Schedule II licence eligibility is relinquished from a vessel with an OAL less than the MVL but greater than the OAL of the vessel licensed as at January 31, 1993, in future, the licence eligibility may be placed on an unlicensed vessel up to the OAL of the vessel that relinquished the C licence eligibility. There is no change to the MVL for the Halibut licence eligibility.

Vessels may hold more than one Halibut licence eligibility in a year, but not at the same time.

Vessels may not fish Halibut under the authority of more than one licence eligibility a year.

When vessel owners wish to swap two married Halibut licence eligibilities, neither licence may exceed the MVL assigned to the licence eligibility.

Vessel owners wishing to make permanent or temporary vessel replacements for commercial Halibut licence eligibilities must apply to a PFLU.

5.7. Temporary Vessel Replacement

The temporary placement of category L Halibut licence eligibilities is only allowed when the vessel to be replaced becomes a total loss.

Temporary replacement vessels may not have harvested Halibut in the current fishing year and may not exceed the MVL of the category L licence eligibility.

If a category L Halibut licence eligibility is temporarily split from other vessel licence eligibilities, the remaining eligibilities may not be placed on a third vessel.

For further information on vessel replacement policies, please contact a PFLU by telephone at 1-877-535-7307 or email at fishing-peche@dfo-mpo.gc.ca.

6. SECTOR RULES

6.1. 4B (Strait of Georgia) Halibut Fishery

Vessels participating in a directed Halibut fishery in area 4B are accountable for all species and are responsible for any Pacific Halibut, Spiny Dogfish, Yelloweye rockfish, and Quillback rockfish, and Copper, China and Tiger rockfish caught while fishing area 4B.

A non-transferable allocation of Yelloweye rockfish is provided to vessels who apply to fish Halibut in area 4B waters, thus area 4B fishers are not required to acquire quota to cover the catch of Yelloweye. However, vessels are restricted to annual caps of 200 pounds (round weight) of Yelloweye in area 4B.

Subject to variations orders, while fishing under authority of a Halibut licence eligibility legal-sized Sablefish may not be retained from Groundfish Management Area 4B.

No vessel may hold quota holdings in excess of the annual ITQ caps.

6.1.1. Licence Species Temporary Quota Caps

Species	Areas	Licence Species Cap (fresh, round pounds)
Quillback rockfish	4B	178
Copper, China, and Tiger rockfish	4B	22
Dogfish	4B	1,000

Vessels fishing Halibut in 4B are subject to trip limits for:

- (1) Canary rockfish, Silvergray rockfish, Redbanded rockfish, Rougheye rockfish, Shortraker rockfish, Shortspine thornyheads, and other rockfish (as set out in Appendix 1 of the commercial Halibut conditions of licence): the quantity of rockfish landed shall not exceed 50 pounds (23 kg) (fresh, round pounds).
- (2) Lingcod caught and retained from areas 12-1 to 12-13, and 12-15 to 12-48, in any one fishing trip shall not exceed 400 pounds (181 kg) (fresh, round pounds). Lingcod may not be retained from any other area.

The Department will closely monitor the fishing activity in the 4B area, and if the Yelloweye TAC for Area 4B is reached, the fishery in this area will be closed. Once individual vessels have reached their annual limits they will be restricted from further directed Halibut fishing in Area 4B for the remainder of the season.

Those vessels wishing to participate in this fishery are required to apply for an amendment to the Halibut conditions of licence by contacting the Halibut Coordinator.

6.2. Rockfish ITQ

Each Halibut licence eligibility is allocated ITQ by area for the following rockfish species: Yelloweye, Quillback, Copper, China and Tiger, Canary, Silvergray, Rougheye, Redbanded, Shortraker, and Shortspine Thornyhead. Rockfish ITQ are calculated by multiplying the Halibut sector's species' area TAC by a licence eligibility's Halibut permanent ITQ percentage at the start of the season (before any Halibut overage/underage is added). Rockfish ITQ will be subject to temporary reallocation guidelines and ITQ caps outlined below.

6.3. Annual ITQ Caps

All Halibut licence eligibilities are subject to annual ITQ caps for directed and non-directed species. Temporary reallocations of ITQ, up to the ITQ caps listed below, will be permitted. No vessel may hold quota holdings in excess of the annual ITQ caps. Note: please see section 6.1.1 of this appendix for quota caps applicable to area 4B.

6.3.1. Licence Species Temporary Quota Caps

Species	Areas	Licence Species Cap (fresh, round pounds)
Rougheye rockfish	Coastwide	60,000
Quillback rockfish	Coastwide	8,000
Copper, China and Tiger rockfish (total)	Coastwide	2,000
Silvergray rockfish	Coastwide	8,000
Canary rockfish	Coastwide	3,500
Shortspine Thornyhead	Coastwide	16,000
Lingcod	Coastwide	30,000

Redbanded rockfish	Coastwide	24,000
Longnose Skate	Coastwide	5,561
Big Skate	Coastwide	5,000

6.3.2. Licence Species Permanent Quota Caps

Species	Areas	Licence Species Cap (fresh, round pounds)
Longnose Skate	Coastwide	5,561
Big Skate	Coastwide	2,533

6.3.3. Quota Landings Temporary Quota Caps

Species	Areas	Quota Landings Caps (fresh, round pounds)			
Yelloweye rockfish	Coastwide	3,000 if 0 < Halibut* landed < 30,695	6,000 if 30,695 < Halibut* landed < 61,391	6,600 if > 61,391 of Halibut* landed	
		Cap increases in 2,000 blocks up to 6,600, once a 2,000 block is caught			
Shortraker rockfish	Coastwide	8,000 if 0 < Halibut* landed < 30,695	16,000 if 30,695 < Halibut* landed < 61,391	20,000 if > 61,391 of Halibut* landed	
		Cap increases in 2,000 blocks up to 20,000, once a 2,000 block is caught			
Redbanded rockfish	Coastwide	Cap increases in 4,000 blocks up to 24,000, once a 4,000 block is caught			
Rougheye rockfish	Coastwide	Cap increases in 8,000 blocks up to 60,000, once a 8,000 block is caught			
Shortspine thornyhead	Coastwide	Cap increases in 4,000 blocks up to 16,000, once a 4,000 block is caught			
Lingcod	Coastwide	Cap increases in 5,000 blocks up to 30,000, once a 5,000 block is caught			
Sablefish	Coastwide	4,180 if 0 < Halibut* landed < 15,348	8,360 if 15,348 < Halibut* landed < 30,695	12,540 if > 30,695 < Halibut* landed < 46,043	14,250 if > 46,043 < Halibut* landed < 61,391

*Fresh, dressed, head-off weight

Note: 15,348 = 0.25% of Commercial Halibut TAC; 30,695 = 0.5% of Commercial Halibut TAC; 46,043 = 0.75% of commercial Halibut TAC; 61,391 = 1.0% of commercial Halibut TAC

6.3.4. TAC Holdings Quota Caps

The maximum quantity of Halibut ITQ that can be held by a vessel is 1.0 percent of the season's TAC (including both permanent and temporary transfers, but not including any carryover of ITQ underage from the previous year). However,

vessels that fished greater than 1.0% of the TAC in any year from 1993 to 1998 are allowed to hold quota up to their individual maximum. With the 2016/2017 commercial TAC of 2,784.63 tonnes (6,139,050 pounds), the maximum poundage that may be held in permanent and temporary quota by a vessel for 2016/2017 is 27.85 tonnes (61,391 pounds). Underages are excluded from the maximum TAC Holdings Quota Cap.

The minimum quantity of Halibut ITQ that must be held permanently by a vessel is 0.011494% of the commercial Halibut TAC. With the 2016/2017 commercial TAC of 2,784.63 tonnes (6,139,050 pounds), the minimum poundage that must be permanently held by a vessel for 2016/2017 is 0.32 tonnes (706 pounds). The minimum can be temporarily reallocated during the year.

6.4. Trip Limits

Trip limits for non-directed species of groundfish caught while fishing Halibut:

Species	Trip Limit (fresh, round pounds)	
“Other Rockfish,” as set out in Appendix 1 in the conditions of licence, including Bocaccio.	5,000 pounds	
Bocaccio	Landings (round weight) per trip may not exceed:	
	100 pounds where 10,000 pounds or less of Halibut* is landed	100 pounds plus 1% of the amount of Halibut landed in excess of 10,000 pounds, to a maximum of 600 pounds of Bocaccio
Pacific cod	500 pounds	
Sole and flounder	No limit	

* Fresh, dressed, head-off weight

6.5. Fishing Restriction for exceeding an ITQ

Licence eligibilities that exceed their uncaught ITQ for Halibut as of the vessel’s last trip by more than 10%, or 400 pounds, whichever is greater, are defined as being in excess overage. Licence eligibilities in excess overage will be restricted from further fishing activity for the remainder of the fishing year, or until such time that sufficient ITQ is reallocated to the licence eligibility to cover any overages.

Licence eligibilities that exceed their total ITQ by area for non-directed species by more than 30%, or 100 pounds, whichever is greater, are defined as being in a state of excess overage. Licence eligibilities in excess overage will be restricted from further fishing activity for the remainder of the fishing year, or until such time that sufficient ITQ is reallocated to the licence eligibility to cover any overages.

Licenses that do not reconcile overages by February 20, 2017, will carry overages into the new season (see section 6.7.3. of this harvest plan). If a licence eligibility remains in excess overage following initial allocations of ITQ, the licence eligibility will be restricted from fishing until temporary reallocations for the 2017/2018 season are processed in mid-March (see section 6.6.7 of this harvest plan).

6.6. Reallocation of Directed and Non-Directed Species ITQ

The following guidelines for the reallocation of directed and non-directed species ITQ are in effect for the 2016/2017 fishery.

- 6.6.1. Subject to annual ITQ caps and sector caps, upon application, licence eligibility holders will be permitted to make unlimited temporary reallocations of directed and non-directed species ITQs. A “Temporary Reallocation Request for Integrated Groundfish Fisheries” must be completed and submitted to the GMU and, if approved, a licence amendment will be issued to reflect new ITQ amounts. The most current licence amendment must be onboard when fishing.
- 6.6.2. For permanent Halibut ITQ reallocations, all vessel owners/licence eligibility holders on record must complete and sign a “Permanent Reallocation Request for Integrated Groundfish Fisheries.” For temporary reallocations of ITQ only one owner or the licence eligibility holder is required to sign the “Temporary Reallocation Request for Integrated Groundfish Fisheries” form.
- 6.6.3. If the vessel owner is a company or First Nations group, only an authorized signing authority may sign the application. A copy of either a “Confirmation of Signing Authorities” or an “Amendment to Confirmation of Signing Authorities” listing the signing authorities must be on file with the GMU.
- 6.6.4. The 2016 Halibut licence eligibility must be issued prior to any ITQ being reallocated.
- 6.6.5. Requests for permanent reallocation of Halibut ITQ must be received by GMU by 16:00 hours local time on February 2, 2017 in order to be processed.
- 6.6.6. Requests for temporary reallocation of directed and non-directed species ITQ must be received by GMU by 16:00 hours local time on February 20, 2017 in order to be processed. Temporary reallocations of directed and non-directed species ITQ are only valid for the current fishing season.
- 6.6.7. Reallocations for the 2016/2017 season will not be processed until 8:00 hours local time March 15, 2016.
- 6.6.8. ITQ that has already been caught or deemed “fished” cannot be reallocated.
- 6.6.9. Permanent reallocations of ITQ will be expressed as a percentage of the TAC, and will be added to the receiving licence eligibility’s percentage of the TAC.

6.6.10. The minimum quantity of ITQ that may be reallocated is one pound.

6.6.11. Temporary reallocations are only valid for the current fishing season.

6.7. Rules for Carryover of Quota Overage and Underage

6.7.1. Carryover of Directed Species ITQ Underage

Licence eligibilities with Halibut catch less than ITQ, including reallocations made during the year, will be permitted to carryover uncaught ITQ up to 10% of their total Halibut ITQ at the end of the fishing season. This equivalent poundage will be added to the licence ITQ in 2017/2018. Any amount above the 10% will be forgone.

6.7.2. Carryover of Non-Directed Species ITQ Underage

Licence eligibilities with non-directed species (except Sablefish and dogfish) catch less than ITQ, including reallocations made during the year, will be permitted to carryover uncaught ITQ up to 30% of their total non-directed species ITQ at the end of the fishing season. This equivalent poundage will be added to the licence ITQ in 2017/2018. Any amount above the 30% will be forgone.

Licence eligibilities with Sablefish catch less than ITQ, including reallocations made during the year, will be permitted to carryover uncaught ITQ up to 15% of their total Sablefish ITQ at the end of the fishing season. This equivalent poundage will be added to the licence ITQ in 2017/2018. Any amount above the 15% will be forgone.

Licence eligibilities with dogfish catch less than ITQ, including reallocations made during the year, will be permitted to carryover uncaught ITQ up to 10% of their total dogfish ITQ at the end of the fishing season. This equivalent poundage will be added to the licence ITQ in 2017/2018. Any amount above the 10% will be forgone.

6.7.3. Carryover of ITQ Overages

Licence eligibilities with catch in excess of ITQ, including reallocations made during the year, will have the overage deducted from the licence eligibility's ITQ in 2017/2018. ITQ to cover these overages will count against the ITQ caps during the season in which the ITQ is allocated to the licence eligibility.

7. BAIT

Commercial fishers wishing to use licensed catch as bait may do so, with the exception of rockfish. All such catch must be accurately recorded in the Integrated Groundfish Fishing Log. Rockfish may not be used as bait, and must be retained and landed.

Octopus caught incidentally may be retained and used for bait under authority of a Halibut licence eligibility, but cannot be landed and sold.

If a quota species is used as bait, the vessel will be assessed an average weight for that species as defined in Appendix 2 of the IFMP.

8. COMBINED HALIBUT AND SABLEFISH FISHING

Vessels conducting combined Halibut and Sablefish trips will be required to identify their intentions at the time of hail-out and will receive two hail-out numbers.

Those vessels conducting combination Halibut and Sablefish trips may assign directed and non-directed quota species catch to either their L licence eligibility or their K licence eligibility as long as they are within the quota caps for that fishery. This includes splitting catch for the same species between the two licence eligibility types if so desired. It is the responsibility of the vessel master at the time of offload to communicate this to the dockside observer. Trip limit allowances for quota species will be determined using the licence eligibility that the landed catch is assigned to. Trip limit allowances for all non-quota species will be determined using the Sablefish licence eligibility only.

If fishing on a combination trip the vessel may only fish in areas open to directed Sablefish fishing (see section 4.2 and section 11 of Appendix 7 for the waters in which commercial Sablefish fishing is permitted to occur).

9. DUAL FISHING

Dual fishing means fishing for commercial and First Nation Food, Social, and Ceremonial purposes on the same fishing trip. Dual fishing is authorized through licence conditions for commercial groundfish fisheries. Vessel masters considering dual fishing are responsible for reviewing their licence conditions to ensure they are aware of the dual fishing requirements.

Before hailing-out on a dual fishing trip, the vessel master must obtain a dual fishing designation certificate from a designating First Nation that has a communal licence authorizing the harvest of groundfish. The designation certificate must contain all of the information set out in the conditions of licence. If any of the information is missing the designation certificate will not be considered valid and the vessel master cannot dual fish.

A designation certificate template is available on the DFO website: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.html>. Aboriginal organizations may issue their own designation certificate as long as the required information is included.

When hailing-out, the vessel master must notify the hail service provider that they will be dual fishing, provide the name of the First Nation that issued the designation certificate,

and provide the unique designation certificate identification number. The vessel master must carry the designation certificate on board the vessel at all times during the fishing trip. The vessel master must record, by set and by species, the fish retained under the authority of the designation certificate. This information must be recorded in the comments section and the retained column of the Integrated Groundfish Fishing Log.

All retained fish, including both commercial and FSC catch, must be recorded in the “retained” column of the Integrated Groundfish Fishing Logbook. Additionally, fish retained as FSC catch must be separated out and recorded by set and by species in the “comments” section of the Integrated Groundfish Fishing Logbook.

When hailing-in, the vessel master must provide an estimate, by species, of the weight of fish caught under the authority of the designation certificate. Unless the designating First Nation requests to have the FSC fish landed and validated at a different location, all fish from the trip must be landed at the same place and validated by a designated groundfish dockside observer. At the time of offload, the vessel master must provide a valid designation certificate to the dockside observer. If one is not provided, all catch from the trip will be considered commercial catch until the completion of a review by the Groundfish Management Unit and discussion with the vessel master. Furthermore, if FSC fish are landed at a different location than the commercial catch, an FSC validation record containing the verified weight and the number of pieces by species must be completed by a fisheries representative of the designating First Nation organization. The vessel master must obtain a copy of the FSC validation record and provide it to the designated groundfish dockside monitor at the time of the commercial offload.

10. RECREATIONAL FISHING

Fish harvesters are reminded that under Section 14 of the *British Columbia Sport Fishing Regulations, 1996*, it is unlawful to have Halibut on board taken by sport fishing if there are any other fish on board the vessel destined for commercial sale.

11. CLOSURES

11.1. General

11.1.1. Swiftsure

Those portions of Subareas 121-1 and 121-2 inside a line:

that begins at	48°34.00' N	125°06.00' W
then true east to	48°34.00' N	124°54.20' W
then to	48°29.62' N	124°43.40' W

then following the International Boundary
between Canada and the United States of

America to

48°29.30' N 124°58.00' W

then to the beginning point.

11.1.2. Haida Gwaii

Subareas 2-1, 2-31 to 2-37, 2-63 to 2-68; and that portion of Subarea 2-69 from Hunter Point to Fame Point shoreward of the coordinates laid out below. These areas are closed year round for all commercial groundfish fisheries. The intent of the closure is to reduce harvesting pressure on localized stocks of fish and to provide improved access for First Nations Food, Social, and Ceremonial purposes.

Subarea 2-69

The portion of Subarea 2-69 inside a line:

that begins at Fame Point 53°17.060' N 132°42.415' W

then to 53°17.060' N 132°43.800' W

then to 53°16.350' N 132°44.700' W

then abutting the boundary of 2-68 53°15.208' N 132°43.597' W

Then to Hunter Point 53°15.208' N 132°42.984' W

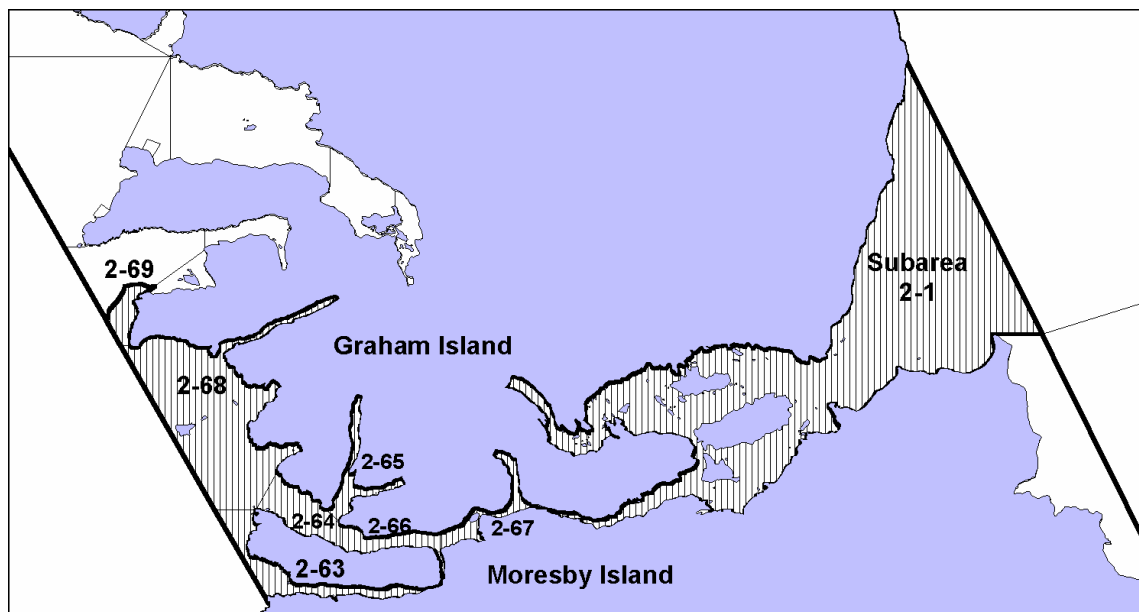


Figure 1. Haida Gwaii closed areas.

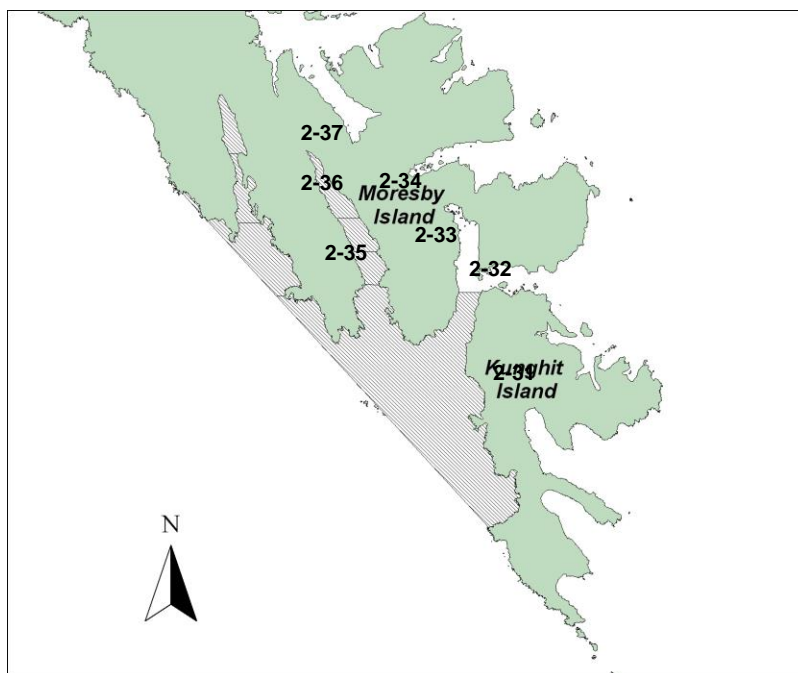


Figure 2. Haida Gwaii closed areas.

11.2. Rockfish Conservation Areas

Currently there are 164 Rockfish Conservation Areas (RCAs) in effect; these are outlined in the Protecting British Columbia's Rockfish booklet. These booklets can be downloaded from the DFO's internet site at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/rca-acs/index-eng.html>

11.3. Gwaii Haanas National Marine Conservation Area

Commercial and recreational fishers and harvesters are reminded that extraction of any kind (e.g., fishing, kelp harvest) is not permitted in the areas of the National Marine Conservation Area described below:

11.3.1. Burnaby Narrows

Those waters of Subareas 2-13 and 2-16 inside a line:

commencing at	52°23.049 N	131°23.438 W
then east to	52°23.077 N	131°22.908 W
following the southern shoreline of Kat Island east to	52°23.107 N	131°22.274 W
then east to	52°23.295 N	131°21.34 W
following the western shoreline of Burnaby Island south to	52°20.951 N	131°20.509 W
then west to	52°20.733 N	131°21.072 W
then north following the eastern shoreline of Moresby Island back to the point of commencement.		

11.3.2. Louscoone Estuary

Those waters of Subareas 2-33 and 2-34 north of a line:

drawn from	52°11.836 N	131°15.658 W
then true east to	52°12.271 N	131°14.594 W

11.3.3. Flamingo Estuary

Those waters of Subarea 2-37 north of a line:

drawn from	52°14.456 N	131°22.234 W
then southeast to	52°14.246 N	131°21.489 W

11.3.4. Gowgaia Estuary

Those waters of Subarea 2-41 east of a line:

drawn from	52°24.944 N	131°32.138 W
then southeast to	52°24.238 N	131°32.024 W

11.3.5. Cape Saint James

Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line:

commencing at	51°56.523 N	131°01.522 W
then southwest to	51°55.627 N	131°02.574 W
then southeast to	51°52.5 N	130°57.919 W
then south to	51°51.676 N	130°57.805 W
then southeast to	51°50.349 N	130°56.442 W
then northeast to	51°51.062 N	130°54.717 W
then north to	51°53.888 N	130°55.608 W
then northwest to	51°58.671 N	130°59.464 W
then west to	51°58.743 N	131°00.606 W

and then following the southern shore of Kungit Island to the point of commencement.

11.3.6. SGang Gwaay

Those waters of Subareas 2-31 and 142-1

inside a 3 km radius from the centre

point on Anthony Island located at:	52°05.655 N	131°13.178 W
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For more background information on the National Marine Conservation Area please see IFMP section 8.2.

11.4. Seasonal Closures

A 72 hour closures goes into effect prior to the Pacific Halibut opening each year for all commercial hook and line fishing vessels permitted to retain Pacific Halibut (Figure 3). The intent of the closure is to ensure a fair and orderly opening for the Pacific Halibut fishery.

Those portions of Area 101 that are:

east of the meridian passing through 134°00.0' west longitude;

west of the meridian passing through 132°40.0' west longitude; and

south of the parallel passing through 54°30.0' north latitude.

Those portions of Subareas 102-2, 102-3, 108-2, 130-2, 130-3 and 142-1 that are inside a line that:

that begins at	52°11.0' N	131°22.16' W
then westerly to	52°10.0' N	131°30.0' W
then true south to	51°30.0' N	131°30.0' W
then true east to	51°30.0' N	130°00.0' W
then true north to	52°10.0' N	130°00.0' W
then westerly to	52°13.0' N	131°00.3' W

Those portions of Area 111 and Subarea 130-1 that lie inside a line that:

begins at	51°15.0' N	130°00.0' W
then true east to	51°15.0' N	129°30.0' W
then true south to	51°00.0' N	129°30.0' W
then true west to	51°00.0' N	130°00.0' W
then true north to the beginning point.		

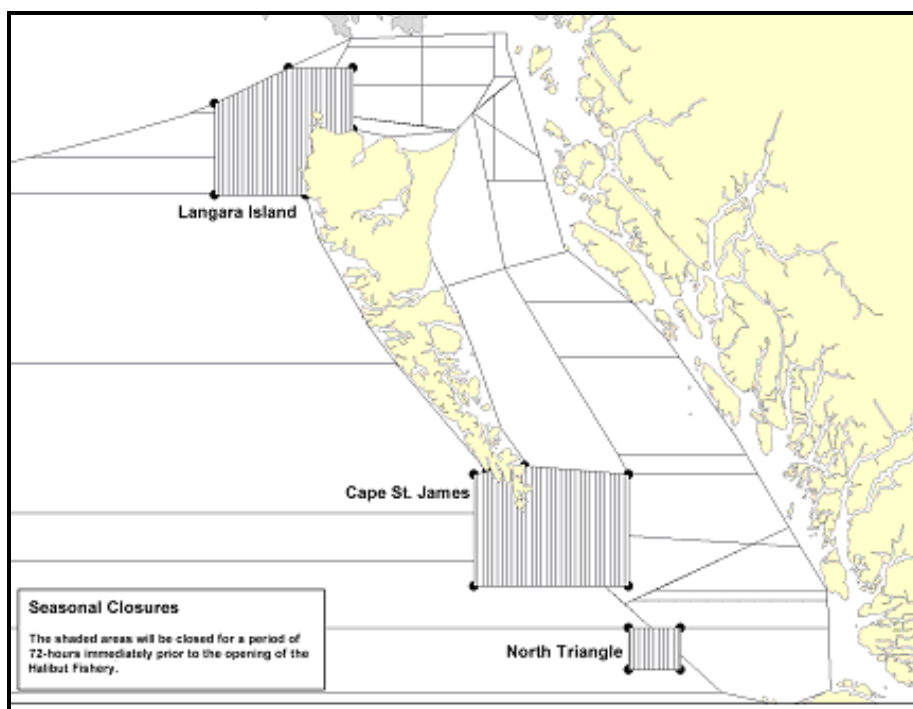


Figure 3. Map of 72-hour “Halibut opening” closure areas

Appendix 7: Sablefish Commercial Harvest Plan

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1. MANAGEMENT UPDATES & CHANGES FOR 2016/2017

1.1. In-Season Changes/Updates

In-season updates are available on the Fishery Notice website at: http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=commercial.

In-season Sector Catch and Sector Cap summaries are updated daily and can be found at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.htm>

1.2. Outside Yelloweye Rockfish rebuilding

Based on updated science information, application of DFO's *Fishery Decision-Making Framework Incorporating the Precautionary Approach*, and consultation with interested parties, the Department is pursuing catch reductions for the outside population of Yelloweye Rockfish in Groundfish Management Areas 3 and 5.

The Department will review the efficacy of catch reduction measures at the end of each fishing season and consider any additional measures necessary to support stock rebuilding. Please refer to conditions of licence and this harvest plan for further information.

1.3. Commercial Management and Allocation of Big and Longnose Skates

Consistent with the Department's direction of explicit and transparent allocations and to further promote stewardship of skate species, consultation between DFO and groundfish fishing interests were initiated in 2013 to (1) establish total allowable catches (TACs) for these species in areas 3 C/D, 5A/B and 5C/D/E (2) strengthen commercial management measures, and (3) establish a commercial allocation formula that apportions the commercial TAC among commercial fisheries. These changes were incorporated in the 2015/16 IFMP. DFO planned to progressively reduce TACs over a 2 year period for Longnose Skate in each area and Big Skate in Area 3 C/D to support management objectives on these stocks; the last of these reductions will be implemented in the 2016-17 season.

1.4. Quillback, Copper, China, and Tiger Rockfish quota management

In 2015/16, DFO piloted a tool allowing temporary conversion of limited amounts of Quillback quota into Copper, China, Tiger quota to accommodate different harvesting strategies of individual fishers while maintaining CCT catch within the TAC. Attempted implementation of the pilot program revealed technical challenges which DFO was unable to resolve. The pilot has been discontinued.

1.5. National Online Licensing System (NOLS) Client Support - Licensing Services

All fish harvesters/Licence Holders/vessel owners are now required to use the National Online Licensing System (NOLS) to view, pay for and print their commercial fishing licences, licence conditions and/or receipts.

Training materials, including step-by-step guides and a detailed user training manual, are available online (<http://www.dfo-mpo.gc.ca/FM-GP/SDC-CPS/licence-permis-eng.htm>) to guide users of the system in completing their licensing transactions. The Department also provides client support and assistance on how to use the system via e-mail at fishing-peche@dfo-mpo.gc.ca or by calling toll-free at 1-877-535-7307 (7:00 AM to 8:00 PM Eastern, Monday to Friday).

For more information on how to register and use the system, visit the Department's website at the address above, or contact our client support.

1.6. Fishing Log Audit Changes

As described in appendix 2, section 12, following every trip there will be an audit of the accuracy of the completed fishing log. Previously, Sablefish discarded during a directed Sablefish trip were assumed to be sub-legal sized fish and did not have to be measured as part of the audit process. For the 2016/2017 season all Sablefish must be measured and will be scored through the audit process.

1.7. Partial Offloads

Vessels fishing under the authority of a category K licence eligibility are permitted to land only a portion of their catch during a "partial offload."

A partial offload is a manner of fishing by which a vessel offloads some catch before returning to the fishing grounds for additional fishing. A maximum of two trip "legs" are permitted in a partial offload fishing trip, meaning fishing would occur in the following manner: hail out, fish, hail in, land some portion of catch, fish, hail in, land all catch, complete data processing (e.g. audit fishing log and issue Quota Status Report).

At the end of each partial offload, all logbook pages, validation records, and electronic monitoring data must be provided to the service provider. For vessels fishing with EM, a partial offload will require a hard drive exchange.

Trip limits are assessed at the end of the final hail-in, at the service provider's head office (as opposed to on the dock as occurs for traditional offloads). Trip limits are based on all catch that occurred between the hail-out and the final hail-in.

Partial offloads are prohibited for Pacific Halibut.

2. SPECIES

The following species are permitted to be retained under Part 1 and Schedule II, Part 2 of a valid Sablefish licence eligibility with the appropriate amendment.

Sablefish (*Anoplopoma fimbria*)

Halibut (*Hippoglossus stenolepis*)

Rockfish (*Sebastes spp. and Sebastolobus spp.*)

Lingcod (*Ophiodon elongates*)

Spiny Dogfish (*Squalus suckleyi*)

Skate (*Rajidae*)

Sole and Flounder (*Pleuronectiformes*, other than *Hippoglossus stenolepis*)

Pacific cod (*Gadus macrocephalus*)

3. GEAR

Hook and line, and trap gear.

By regulation, no person shall fish for Sablefish with a trap, unless the trap has a side wall a section that has been laced, sewn or otherwise secured by a single length of untreated natural fibre not larger than two millimetres in diameter and that, on deterioration or parting, produces in the side wall an opening with four sides, each of which is at least 20 centimetres in length.

No person shall fish for Sablefish with a trap unless the trap has in the side walls at least two escape openings each having an inside diameter of not less than 8.89 centimetres which creates an unrestricted exit out of the trap.

No person shall set a trap and leave the trap in the water for more than four consecutive days without lifting the trap from the water and removing all of the catch.

4. QUOTAS AND OPEN TIMES

4.1. Open Times

The 2016/2017 Sablefish fishery will commence 00:01 hours, February 21, 2016 and close at 23:59 hours, February 20, 2017. Following the closure of the fishery, all fish caught under the authority of a Sablefish licence eligibility must be landed and validated by a DFO-designated groundfish dockside observer no later than 23:59 hours, February 27, 2017.

No Halibut may be retained until the 2016 Halibut fishery commences at 12:00 hours, March 19, 2016. The directed Halibut fishery will close at 12:00 hours, November 7, 2016. Accordingly, all Halibut must be landed and validated by a DFO-designated groundfish dockside observer no later than 12:00 hours, November 14, 2016.

The retention of Lingcod by hook and line gear will be permitted from April 1, 2016 to 23:59 hours November 14, 2016. Accordingly, all Lingcod must be landed and validated by a DFO-designated groundfish dockside observer no later than 23:59 hours local time, November 21, 2016.

To allow an orderly opening for the 2016 Pacific Halibut season, variation orders are issued to close three areas (Langara Island, Cape St. James, and North Triangle) for 72 hours prior to the opening of the Pacific Halibut season. The variation orders close the fisheries Skate, Sole, Flounder and Spiny Dogfish by Hook and Line, Pacific Cod by Hook and Line, Rockfish by Hook and Line, and Sablefish by Longline. Please review all variation orders prior to fishing.

4.2. Fishing Areas

Subject to closures described in section 11 of this harvest plan and variation orders, the waters in which commercial Sablefish fishing is permitted to be carried out are:

Areas: 1, 2, 101, 108 to 111, 121, 123 to 127, 130, 142, Sub-area 102-3 and that portion of Subarea 102-2 that lies southerly of a line from 52°10.00' north latitude and 130°57.395' west longitude to 52°27.020' north latitude and 130°16.621' west longitude (portions of Groundfish Management Areas 3C, 3D, 5A, 5B, 5C, 5D, and 5E).

When hailed out on a combination Halibut and Sablefish trip, a vessel can only fish in areas open to directed Sablefish fishing (see section 8 of this harvest plan).

While fishing under authority of a Halibut, Rockfish or a Schedule II species licence eligibility only, non-directed, legal-sized Sablefish caught may be retained from any area or subarea open to fishing under the authority of a Halibut, Rockfish or a Schedule II species commercial licence eligibility, except Groundfish Management Area 4B. Retention of Sablefish is also subject to closures described in section 11 of this harvest plan and variation orders.

4.3. Total Allowable Catch

The 2016/2017 coastwide Sablefish total allowable catch (TAC) is 1,992 tonnes (all Sablefish weights are fresh, round weight). The Sablefish TAC is determined annually using information from an annual fishery-independent Sablefish survey, and the commercial Sablefish fishery. These data are used to estimate Sablefish biomass which is incorporated into a harvest control rule that is compliant with DFO's *Fishery Decision Making Framework incorporating the Precautionary Approach*. From the TAC, access is allocated for First Nation Food, Social, and Ceremonial (FSC) purposes, aquaculture broodstock collection, and research and management. Section 10 of the Fisheries Act permits the Minister of Fisheries and Oceans to allocate fish for the purpose of financing scientific and fisheries management activities.

After accounting for FSC and research, access is allocated to commercial sectors. Access totalling 4 tonnes is provided to the aquaculture industry for the collection of broodstock. In a manner similar to directed commercial groundfish fisheries (appendix 2 of the groundfish IFMP), aquaculture access accounts for the mortality associated with the retention and release of Sablefish caught during the collection of broodstock. The balance of the TAC is allocated between the directed Sablefish fishery (91.25%) and the groundfish Trawl fishery (8.75%).

In 2016 the Sablefish TAC has been allocated as:

Food, Social, and Ceremonial	45.36 tonnes	100,000 pounds
Research; tagging	3.34 tonnes	7,352 pounds
Research; catch sampling program	1.68 tonnes	3,695 pounds
Use of Fish allocation; trap survey	70.00 tonnes	154,323 pounds
Use of Fish allocation; trawl survey	6.16 tonnes	13,580 pounds
Category K licence eligibility TAC	1,698.19 tonnes	3,743,838 pounds
Category T licence eligibility TAC	162.84 tonnes	358,998 pounds
Aquaculture broodstock collection	4.00 tonnes	8,814 pounds
Total Allowable Catch*	1,992.00 tonnes	4,391,603 pounds

* Excludes carryover of overages and underages from the previous season (see section 6.5 of this harvest plan).

5. LICENSING

5.1. Licence Category

A commercial Sablefish category K or a communal commercial Sablefish category FK licence eligibility is required to participate in the directed commercial Sablefish fishery.

Category K Sablefish licence eligibilities are limited entry and vessel-based. Category FK eligibilities are limited entry and party-based; an Aboriginal group is the licence eligibility holder and the eligibility must be designated to a commercially registered fishing vessel that meets established length restrictions.

Vessels authorized to fish under the authority of a Sablefish licence eligibility are also permitted to catch and retain other groundfish species by hook and line gear, and trap gear as outlined in conditions of licence. These vessels are also permitted to catch and retain species described in Schedule II, Part 2 of the *Pacific Fishery Regulations, 1993*, catch and retain other groundfish species, transport non-groundfish species caught by other vessels and be designated to fish under the authority of a category Z licence.

5.2. Licence Renewal Fees

The commercial Sablefish licence renewal fee is based on the following formula: \$241 multiplied by the number of tonnes of Sablefish initially allocated to the licence

eligibility, less 40 percent of that product, up to a maximum reduction of \$1000. There is no annual licence renewal fee for communal commercial category FK licenses.

5.3. Licence Application and Issuance

Renewal of a Category K licence and payment of the fees must be done on an annual basis to retain the privilege to be issued the licence in the future, regardless of whether or not fishing is carried out. Those category K licenses not renewed by February 20, 2017 will cease and licence issuance requests will be unable to be considered in future.

Prior to annual licence issuance of a communal commercial licence, licence eligibility holders are required to annually designate the fishing vessel to hold the licence. This must be done by navigating to the ‘Submit a Request’ menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>).

Prior to annual application, vessel owner(s)/licence eligibility holders are required to:

- a) Meet any Ministerial conditions placed on the licence eligibility.
- b) Ensure any conditions of the previous year’s licence are met.

5.4. Licence Amendment

The Sablefish licence eligibility must be issued prior to the processing of a request for licence amendment or reallocation of ITQ. The vessel owner/master must have on board a valid Sablefish licence amendment prior to fishing.

This amendment outlines the total amount of fish by species that the vessel can land for the fishing season. Without this amendment the vessel is not permitted to catch, retain or land any fish.

A “Request for Licence Amendment” must be completed by the vessel owner/licence eligibility holder or the designated agent and faxed to the Groundfish Management Unit at (604) 666-8525. Request forms and other applicable forms are available online at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/form-eng.htm>.

5.5. Licence Documents

Sablefish licence documents are valid from the date of issue to February 20, 2017.

Replacements for lost or destroyed licence documents may be obtained by reprinting the licence documents through the NOLS.

5.6. Vessel Replacement

The owner(s) of a category K licensed Sablefish vessel may make an application to replace the commercial fishing vessel. Both the replacement vessel and the vessel being replaced must have a survey on file with the Pacific Fishery Licence Unit (PFLU) or

submitted with the vessel replacement application. Vessels must be surveyed according to the Department guidelines.

Communal commercial licenses are not eligible for vessel replacement as the licence eligibility is party-based.

A single category K Sablefish licence eligibility may be placed on a vessel that does not hold another vessel based licence eligibility as long as the replacing vessel does not exceed the overall length of the existing vessel.

A Sablefish licence eligibility may be separated from any combination of married licence eligibilities as long as it is placed on another commercially licensed fishing vessel of any length, that holds a salmon, geoduck, halibut, crab, shrimp trawl, groundfish trawl or prawn and shrimp by trap licence eligibility. Sablefish licence eligibilities may not be stacked.

In circumstances where the intention is to make the category K licence eligibility a standalone licence, and the replacing vessel holds Schedule II species (category C) licence eligibility, then the Schedule II licence privilege must be permanently retired. The option of relinquishing a schedule II species licence may only be utilized when it is the intention to separate a sablefish licence from a married situation in order to become a standalone sablefish licence.

Where the Sablefish licence eligibility is temporarily placed on a vessel which holds Schedule II species licence eligibility, then the Schedule II licence must be returned to a PFLU. The Schedule II licence will be held for the duration of the time the Sablefish licence is temporarily placed.

Vessel owners wishing to make permanent or temporary vessel replacements for commercial Sablefish licence eligibilities must apply to a PFLU.

5.7. Temporary Vessel Replacement

The temporary placement of Sablefish licence eligibilities is only allowed when the vessel to be replaced becomes a total loss.

Temporary replacement vessels may not have harvested Sablefish in the current fishing year and may not exceed the Maximum Vessel Length (MVL) of the Sablefish licence eligibility.

If a Sablefish licence eligibility is temporarily split from other vessel licence eligibilities, the remaining eligibilities may not be placed on a third vessel.

For further information on vessel replacement policies, please contact a PFLU by telephone at 1-877-535-7307 or email at fishing-peche@dfo-mpo.gc.ca.

6. SECTOR RULES

6.1. Annual ITQ Caps

All Sablefish licence eligibilities are subject to annual ITQ caps for directed and non-directed species. Temporary reallocations of ITQ, up to the ITQ caps listed below, will be permitted. No vessel may hold quota holdings in excess of the annual ITQ caps.

6.1.1. Licence Species Temporary Quota Caps

Species	Areas	Licence Species Cap (fresh, round pounds)
Halibut	Coastwide	61,391
Lingcod	Coastwide	33,772
Canary rockfish	Coastwide	14,542
Silvergray rockfish	Coastwide	9,836
Yelloweye rockfish	Coastwide	6,000
Quillback rockfish	Coastwide	1,459
Copper, China and Tiger rockfish (total)	Coastwide	486
Redbanded rockfish	Coastwide	50,000
Rougheyeye rockfish	Coastwide	180,000
Shorotraker rockfish	Coastwide	64,000
Shortspine thornyhead	Coastwide	40,000
Longnose Skate	Coastwide	30,000
Big Skate	Coastwide	20,000

Note: 61,391 = 1.0% of commercial Halibut TAC

6.1.2. Licence Species Permanent Quota Caps

Species	Areas	Licence Species Cap (fresh, round pounds)
Longnose Skate	Coastwide	20,000
Big Skate	Coastwide	10,000

Note: 20,000 = 26.8% of commercial Sablefish sector's Longnose Skate TAC

Note: 10,000 = 43.0% of commercial Sablefish sector's Big Skate TAC

6.1.3. Quota Landings Temporary Quota Caps

Species	Areas	Quota Landings Caps (fresh, round pounds)
Halibut	Coastwide	Cap increases in 1,500 blocks up to 61,391, for every 10,000 Sablefish caught
Yelloweye rockfish	Coastwide	Cap increases in 2,000 blocks up to 6,000, for every 10,000 Sablefish caught
Quillback rockfish	Coastwide	Cap increases in 1,000 blocks up to 1,459, for every 5,000 Sablefish caught
Lingcod	Coastwide	Caps increase in 7,500 blocks up to 33,772, for every 10,000 Sablefish caught

Note: 61,391 = 1.0% of commercial Halibut TAC

6.2. Trip Limits

Trip limits for non-directed species of groundfish caught while fishing Sablefish:

Species	Trip Limit (fresh, round pounds)	
“Other Rockfish,” as set out in Appendix 1 in the conditions of licence, including Bocaccio.	5,000 pounds	
Bocaccio*	Landings per trip may not exceed:	
	100 pounds where 10,000 pounds or less of Sablefish is landed	100 pounds plus 1% of the amount of Sablefish landed in excess of 10,000 pounds, to a maximum of 600 pounds of Bocaccio
Pacific cod	500 pounds	
Sole and Flounder	No limit	

* When combined Halibut and Sablefish fishing, the permitted amount of Bocaccio is based on the combined landed weight of Halibut (fresh, dressed, head-off pounds) and Sablefish (round pounds).

6.3. Fishing Restrictions for Exceeding ITQ Species Caps

Licence eligibilities that exceed their total Sablefish ITQ by more than 10%, or 1,000 pounds, whichever is greater, are defined as being in excess overage. Licence eligibilities in excess overage will be restricted from further fishing activity for the remainder of the fishing year, or until such time that sufficient ITQ is reallocated to the licence eligibility to cover any overages.

Licence eligibilities that exceed their total ITQ for non-directed species by more than 30%, or 100 pounds, whichever is greater, are defined as being in excess overage. Licence eligibilities in excess overage will be restricted from further fishing activity for the remainder of the fishing year, or until such time that sufficient ITQ is reallocated to the licence eligibility to cover any overages.

Licence eligibilities that do not reconcile excess overages by February 20, 2017, will carry excess overages into the new season (see sections 6.5.3.). If a licence eligibility remains in excess overage following initial allocations of ITQ, the licence eligibility will be restricted from fishing until such time that sufficient ITQ is reallocated to the licence eligibility to cover any overages. Note that temporary reallocations for the 2017/2018 season are first processed in mid-March (see section 6.4.7 of this harvest plan).

6.4. Reallocation of Directed and Non-Directed Species ITQ

The following guidelines for the reallocation of directed and non-directed species ITQ are in effect for the 2016/2017 fishery.

- 6.4.1. Subject to annual ITQ caps and sector caps, upon application, licence eligibility holders will be permitted to make unlimited temporary reallocations of directed and non-directed species ITQs. A “Temporary Reallocation Request for Integrated Groundfish Fisheries” must be completed and submitted to the GMU and, if approved, a licence amendment will be issued to reflect new ITQ amounts. The most current licence amendment must be onboard when fishing.
- 6.4.2. For permanent Sablefish ITQ reallocations, all vessel owners/licence eligibility holders on record must complete and sign a “Permanent Reallocation Request for Integrated Groundfish Fisheries.” For permanent reallocations, all signatures must be notarized. For temporary reallocations of ITQ only one owner or the licence eligibility holder is required to sign the “Temporary Reallocation Request for Integrated Groundfish Fisheries” form.
- 6.4.3. If the vessel owner is a company or First Nations group, only an authorized signing authority may sign the application. A copy of either a “Confirmation of Signing Authorities” or an “Amendment to Confirmation of Signing Authorities” listing the signing authorities must be on file with the GMU.
- 6.4.4. The 2016/2017 Sablefish licence eligibility must be issued prior to any ITQ being reallocated.
- 6.4.5. Requests for permanent reallocation of Sablefish ITQ must be received by GMU by 16:00 hours local time on February 2, 2017 in order to be processed.
- 6.4.6. Requests for temporary reallocation of directed and non-directed species ITQ must be received by GMU by 16:00 hours local time on February 20, 2017 in order to be processed. Temporary reallocations of directed and non-directed species ITQ are only valid for the current fishing season.
- 6.4.7. Reallocations for the 2016/2017 season will not be processed until 8:00 hours local time March 15, 2016.
- 6.4.8. ITQ that has already been caught or deemed “fished” cannot be reallocated.
- 6.4.9. Permanent reallocations of ITQ will be expressed as a percentage of the TAC, and will be added to the receiving licence eligibility’s percentage of the TAC.
- 6.4.10. The minimum quantity of ITQ that may be reallocated is one pound.
- 6.4.11. Temporary reallocations are only valid for the current fishing season.

6.5. Rules for Carryover of Quota Overage and Underage

6.5.1. Carryover of Directed Species ITQ Underage

Licence eligibilities with Sablefish catch less than ITQ, including reallocations made during the year, will be permitted to carryover uncaught ITQ up to 30% of

their total Sablefish ITQ at the end of the fishing season. This equivalent poundage will be added to the licence ITQ in 2017/2018. Any amount above the 30% will be forgone. The 30% carryover provision will be reviewed annually to ensure sustainability of the stock.

6.5.2. Carryover of Non-directed ITQ Underage

Licence eligibilities with non-directed species (except dogfish) catch less than ITQ, including reallocations made during the year, will be permitted to carryover uncaught ITQ up to 30% of their total non-directed species ITQ at the end of the fishing season. This equivalent poundage will be added to the licence ITQ in 2017/2018. Any amount above the 30% will be forgone.

Licence eligibilities with dogfish catch less than ITQ, including reallocations made during the year, will be permitted to carryover uncaught ITQ up to 10% of their total dogfish ITQ at the end of the fishing season. This equivalent poundage will be added to the licence ITQ in 2017/2018. Any amount above the 10% will be forgone.

6.5.3. Carryover of ITQ Overages

Licence eligibilities with catch in excess of ITQ, including reallocations made during the year, will have the overage deducted from the licence eligibility's ITQ in 2017/2018. ITQ to cover these overages will count against the ITQ caps during the season in which the ITQ is allocated to the licence eligibility.

7. **BAIT**

Commercial fishers wishing to use licensed catch as bait may do so, with the exception of rockfish. All such catch must be accurately recorded in the Integrated Groundfish Fishing Log. Rockfish may not be used as bait, and must be retained and landed.

Octopus caught incidentally may be retained and used for bait under authority of a Sablefish licence eligibility, but cannot be landed and sold.

If a quota species is used as bait, the vessel will be assessed an average weight for that species as defined in Appendix 2 of the IFMP.

8. **COMBINED HALIBUT AND SABLEFISH FISHING**

Vessels conducting combined Halibut and Sablefish trips will be required to identify their intentions at the time of hail-out and will receive two hail-out numbers.

Those vessels conducting combination Halibut and Sablefish trips may assign directed and non-directed quota species catch to either their L licence eligibility or their K licence eligibility as long as they are within the sector caps for that fishery. This includes splitting catch for the same species between the two licence eligibility types if so desired. It is the responsibility of the vessel master at the time of offload to communicate this to the dockside observer. Trip limit allowances for quota species will be determined using the licence eligibility that the landed catch is assigned to. Trip limit allowances for all non-quota species will be determined using the Sablefish licence eligibility only.

If fishing on a combination trip, the vessel may only fish in areas open to directed Sablefish fishing (see section 4.2 and section 11 of this harvest plan for the waters in which commercial Sablefish fishing is permitted to occur).

9. DUAL FISHING

Dual fishing means fishing for commercial and First Nation Food, Social, and Ceremonial purposes on the same fishing trip. Dual fishing is authorized through licence conditions for commercial groundfish fisheries. Vessel masters considering dual fishing are responsible for reviewing their licence conditions to ensure they are aware of the dual fishing requirements.

Before hailing-out on a dual fishing trip, the vessel master must obtain a dual fishing designation certificate from a designating First Nation that has a communal licence authorizing the harvest of groundfish. The designation certificate must contain all of the information set out in the conditions of licence. If any of the information is missing the designation certificate will not be considered valid and the vessel master cannot dual fish.

A designation certificate template is available on the DFO website: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.html>. Aboriginal organizations may issue their own designation certificate as long as the required information is included.

When hailing-out, the vessel master must notify the hail service provider that they will be dual fishing, provide the name of the First Nation that issued the designation certificate, and provide the unique designation certificate identification number. The vessel master must carry the designation certificate on board the vessel at all times during the fishing trip. The vessel master must record, by set and by species, the fish retained under the authority of the designation certificate. This information must be recorded in the comments section and the retained column of the Integrated Groundfish Fishing Log.

All retained fish, including both commercial and FSC catch, must be recorded in the “retained” column of the Integrated Groundfish Fishing Logbook. Additionally, fish retained as FSC catch must be separated out and recorded by set and by species in the “comments” section of the Integrated Groundfish Fishing Logbook.

When hailing-in, the vessel master must provide an estimate, by species, of the weight of fish caught under the authority of the designation certificate. Unless the designating First Nation requests to have the FSC fish landed and validated at a different location, all fish from the trip must be landed at the same place and validated by a designated groundfish dockside observer. At the time of offload, the vessel master must provide a valid designation certificate to the dockside observer. If one is not provided, all catch from the trip will be considered commercial catch until the completion of a review by the Groundfish Management Unit and discussion with the vessel master. Furthermore, if FSC fish are landed at a different location than the commercial catch, an FSC validation record containing the verified weight and the number of pieces by species must be completed by a fisheries representative of the designating First Nation organization. The vessel master must obtain a copy of the FSC validation record and provide it to the designated groundfish dockside monitor at the time of the commercial offload.

10. RECREATIONAL FISHING

Fishers are reminded that under Section 14 of *the British Columbia Sport Fishing Regulations, 1996*, it is unlawful to have halibut on board taken by sport fishing if there are any other fish on board the vessel destined for commercial sale.

11. CLOSURES

Area coordinates throughout the IFMP are provided in several different formats. The format provided in the IFMP is typically consistent with the format provided in the regulation describing the specified area. You are reminded that it is the responsibility of the vessel master to ensure the correct coordinate format is used during navigation and in navigation software.

11.1. General

11.1.1. Swiftsure

Those portions of Subareas 121-1 and 121-2 inside a line:

that begins at	48°34.00' N	125°06.00' W
then true east to	48°34.00' N	124°54.20' W
then to	48°29.62' N	124°43.40' W
then following the International Boundary between Canada and the United States of America to	48°29.30' N	124°58.00' W

then to the beginning point.

11.1.2. Haida Gwaii

Subareas 2-1, 2-31 to 2-37, 2-63 to 2-68; and that portion of Subarea 2-69 from Hunter Point to Fame Point shoreward of the coordinates laid out below. These areas are closed year round for all commercial groundfish fisheries. The intent of the closure is to reduce harvesting pressure on localized stocks of fish and to provide improved access for First Nations Food, Social, and Ceremonial purposes (Figure 2, Figure 3).

Subarea 2-69

The portion of Subarea 2-69 inside a line:

that begins at Fame Point	53°17.060' N	132°42.415' W
then to	53°17.060' N	132°43.800' W
then to	53°16.350' N	132°44.700' W
then abutting the boundary of 2-68	53°15.208' N	132°43.597' W
Then to Hunter Point	53°15.208' N	132°42.984' W

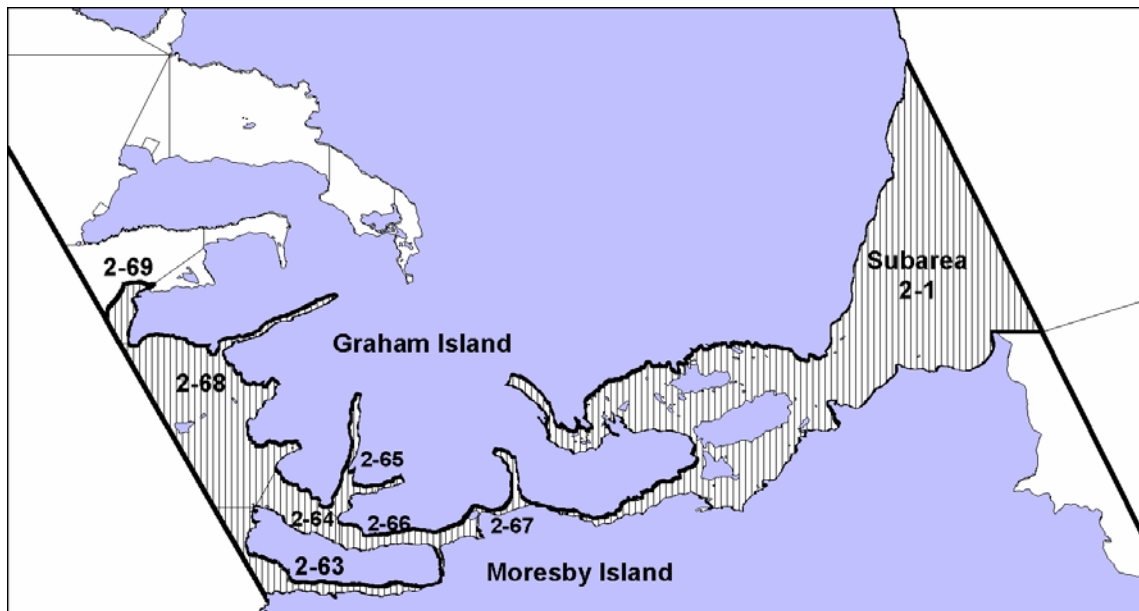


Figure 1. Haida Gwaii closed areas.

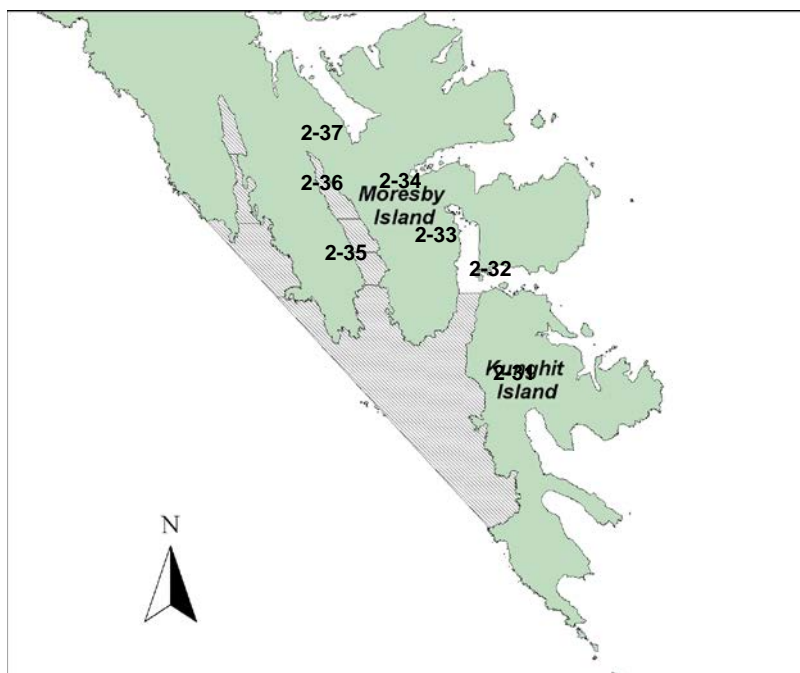


Figure 2. Haida Gwaii closed areas.

11.2. Rockfish Conservation Areas

Currently there are 164 Rockfish Conservation Areas (RCAs) in effect; these are outlined in the [Protecting British Columbia's Rockfish](#) booklet. These booklets can be downloaded from the DFO's internet site at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/maps-cartes/rca-acs/index-eng.html>

11.3. Gwaii Haanas National Marine Conservation Area

Commercial and recreational fishers and harvesters are reminded that extraction of any kind (e.g., fishing, kelp harvest) is not permitted in the areas of the National Marine Conservation Area described below:

11.3.1. Burnaby Narrows

Those waters of Subareas 2-13 and 2-16 inside a line:

commencing at	52°23.049 N	131°23.438 W
then east to	52°23.077 N	131°22.908 W
following the southern shoreline of Kat Island east to	52°23.107 N	131°22.274 W
then east to	52°23.295 N	131°21.34 W
following the western shoreline of Burnaby Island south to	52°20.951 N	131°20.509 W
then west to	52°20.733 N	131°21.072 W
then north following the eastern shoreline of Moresby Island back to the point of commencement.		

11.3.2. Louscoone Estuary

Those waters of Subareas 2-33 and 2-34 north of a line:

drawn from	52°11.836 N	131°15.658 W
then true east to	52°12.271 N	131°14.594 W

11.3.3. Flamingo Estuary

Those waters of Subarea 2-37 north of a line:

drawn from	52°14.456 N	131°22.234 W
then southeast to	52°14.246 N	131°21.489 W

11.3.4. Gowgaia Estuary

Those waters of Subarea 2-41 east of a line:

drawn from	52°24.944 N	131°32.138 W
then southeast to	52°24.238 N	131°32.024 W

11.3.5. Cape Saint James

Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line:

commencing at	51°56.523 N	131°01.522 W
then southwest to	51°55.627 N	131°02.574 W
then southeast to	51°52.5 N	130°57.919 W
then south to	51°51.676 N	130°57.805 W
then southeast to	51°50.349 N	130°56.442 W
then northeast to	51°51.062 N	130°54.717 W
then north to	51°53.888 N	130°55.608 W
then northwest to	51°58.671 N	130°59.464 W
then west to	51°58.743 N	131°00.606 W

and then following the southern shore of Kungit Island to the point of commencement.

11.3.6. SGang Gwaay

Those waters of Subareas 2-31 and 142-1 inside a 3 km radius from the centre

point on Anthony Island located at:	52°05.655 N	131°13.178 W
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For more background information on the National Marine Conservation Area please see IFMP section 8.2.

11.4. Seasonal Closures

A 72 hour closures goes into effect prior to the Pacific Halibut opening each year for all commercial hook and line fishing vessels permitted to retain Pacific Halibut (Figure 3). The intent of the closure is to ensure a fair and orderly opening for the Pacific Halibut fishery.

Those portions of Area 101 that are:

east of the meridian passing through 134°00.0' west longitude;

west of the meridian passing through 132°40.0' west longitude; and
south of the parallel passing through 54°30.0' north latitude.

Those portions of Subareas 102-2, 102-3, 108-2, 130-2, 130-3 and 142-1 that are inside a line that:

that begins at	52°11.0' N	131°22.16' W
then westerly to	52°10.0' N	131°30.0' W
then true south to	51°30.0' N	131°30.0' W
then true east to	51°30.0' N	130°00.0' W
then true north to	52°10.0' N	130°00.0' W
then westerly to	52°13.0' N	131°00.3' W

Those portions of Area 111 and Subarea 130-1 that lie inside a line that:

begins at	51°15.0' N	130°00.0' W
then true east to	51°15.0' N	129°30.0' W
then true south to	51°00.0' N	129°30.0' W
then true west to	51°00.0' N	130°00.0' W
then true north to the beginning point.		

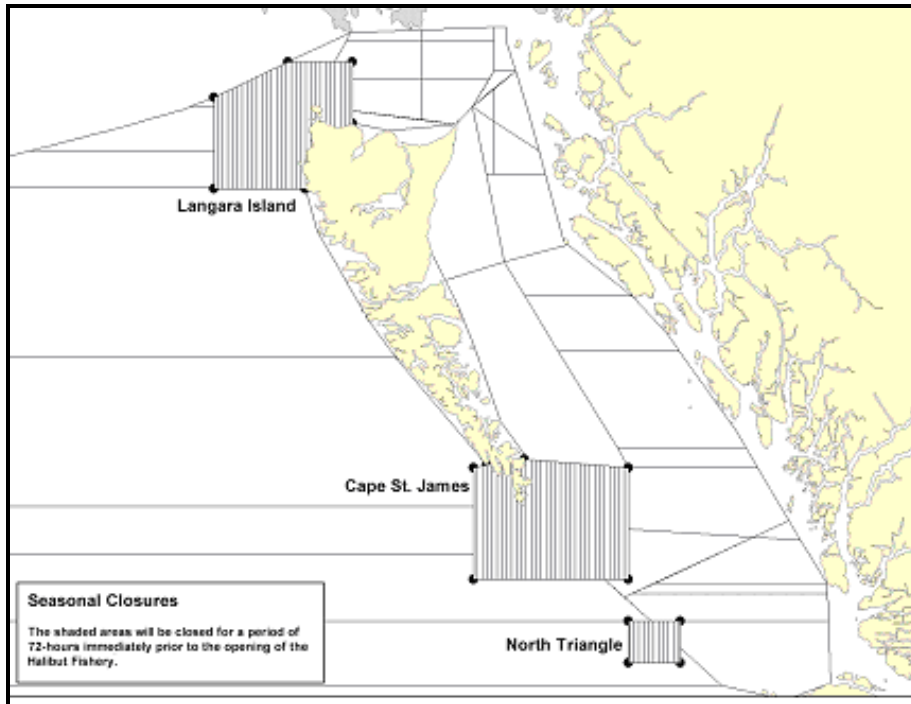


Figure 3. Map of 72-hour “Halibut opening” closure areas

12. OFFSHORE SEAMOUNT FISHERY

12.1. Open Times

The seamount fishery is divided between ‘North’ and ‘South’ management areas. One vessel per month from April 1 to September 30 is permitted to participate in the ‘South’ management area. One vessel per month from May 1 to August 31 is permitted to participate in the ‘North’ management area.

Seamount application forms will be mailed to licence eligibility holders early in the 2016 calendar year. A lottery draw of applicant licence eligibility holders will determine those vessels permitted to participate in the seamount fishery. If a vessel is selected for the North or South seamount fishery but is unable to participate, the eligibility to participate in the seamount fishery cannot be transferred to another sablefish vessel owner/licence eligibility holder. Rather, the opportunity to participate in the fishery must be declined and will be passed to the next vessel selected from the lottery process.

Successful applicants that wish to fish beyond the 200 nautical mile Exclusive Economic Zone must apply for a Section 68 licence to fish in international waters. Please contact the Pacific Fishery Licence Unit (1-877-535-7307, fishing-peche@dfo-mpo.gc.ca) for details.

12.2. Gear and Monitoring Requirements

Trap gear is permitted in both ‘North’ and ‘South’ management areas. Longline gear is prohibited in the ‘North’ management area. Vessels not equipped with trap gear at the time of lottery entry will not be eligible to participate in the Northern seamount fishery.

Vessels participating in the seamount fisheries must adhere to all monitoring requirements as outlined in the IFMP, Appendix 2 and the conditions of licence. During the months of May and June, vessels in the ‘North’ fishery must carry an at-sea observer in place of the electronic monitoring. The at-sea observer is required to collect habitat and biological data. If one or both of the May/June trips does not occur, or an at-sea observer is unavailable, then observer coverage will occur in July and/or August. A minimum of two of the four months that could be fished for the ‘North’ fishery will have at-sea observer coverage.

12.3. Monthly Vessel Limits

For vessels participating in the Sablefish seamount fishery there will be monthly vessel limits. These limits apply to each of the North and South seamount fisheries.

Species	Monthly Vessel Limit (fresh, round pounds)
Sablefish	75,000
Rougheye rockfish	5,000
Other rockfish, sole and flounder	1,000

12.4. SGaan Kinghlas - Bowie Seamount Marine Protected Area

Commercial fishing activities within the MPA are managed through the Integrated Fisheries Management process. Three zones are identified in the IFMP, some of which are fisheries closures which are used to manage the Sablefish fishery. The Sablefish

seamount fishery within the MPA is restricted to Zone 2 of the MPA (Figure 4, Figure 5), with the use of trap gear only. For more information on the SGaan Kinghlas-Bowie Seamount Marine Protected Area (SK-B MPA), refer to section 8.2 of the Groundfish IFMP.

Annual harvest plans will be developed in consultation with interested parties and specific actions (e.g., openings and closures) for the SK-B Marine Protected Area will be taken under the *Fisheries Act* and its regulations. Efforts will be made to align the IFMP and annual harvest plans with the SK-B MPA Management Plan once it is completed. In 2014, new interim management measures for the Sablefish fishery within the SGaan Kinghlas-Bowie Seamount Marine Protected Area (SK-B MPA) have been introduced.

The interim management measures for the “North” management area include:

- Reduced harvest opportunity with the closure of the April and September openings.
- At-sea observer coverage, biosample collection procedures, and deep water cameras and accelerometers deployment, previously required during April and September openings, are now required during the first two trips of the season. In the situation where the required equipment is unavailable for the second seamount trip of the season, the next seamount trip (i.e. July or August) must carry an observer and follow the biosample collection procedures and the camera deployment protocol.
- Initial work to identify an index of abundance for Sablefish at the SK-B MPA.
- Exploratory habitat work will continue with the development and implementation of a coral and sponge encounter protocol to document corals and sponges in the Zone 2 of the MPA.

In 2014, a process for evaluating management strategies against interim management objectives (e.g., for habitat conservation and Sablefish biomass abundance) to inform future management decisions was started, and will continue into 2016.

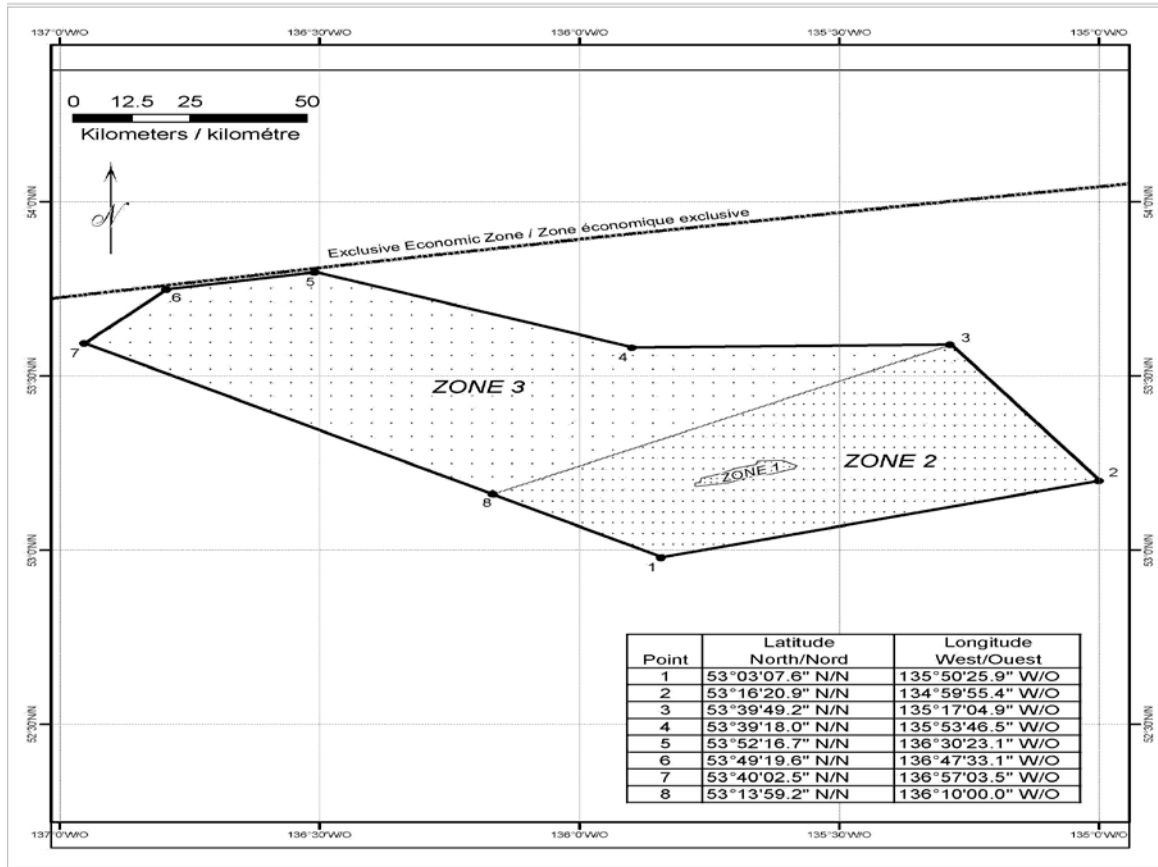


Figure 4. S. Gaan Kinghlas-Bowie Seamount Marine Protected Area. Boundary coordinates are shown here in degrees-minutes-seconds (DMS-format), as per the format in the *Bowie Seamount Marine Protected Area Regulations, 2008*.

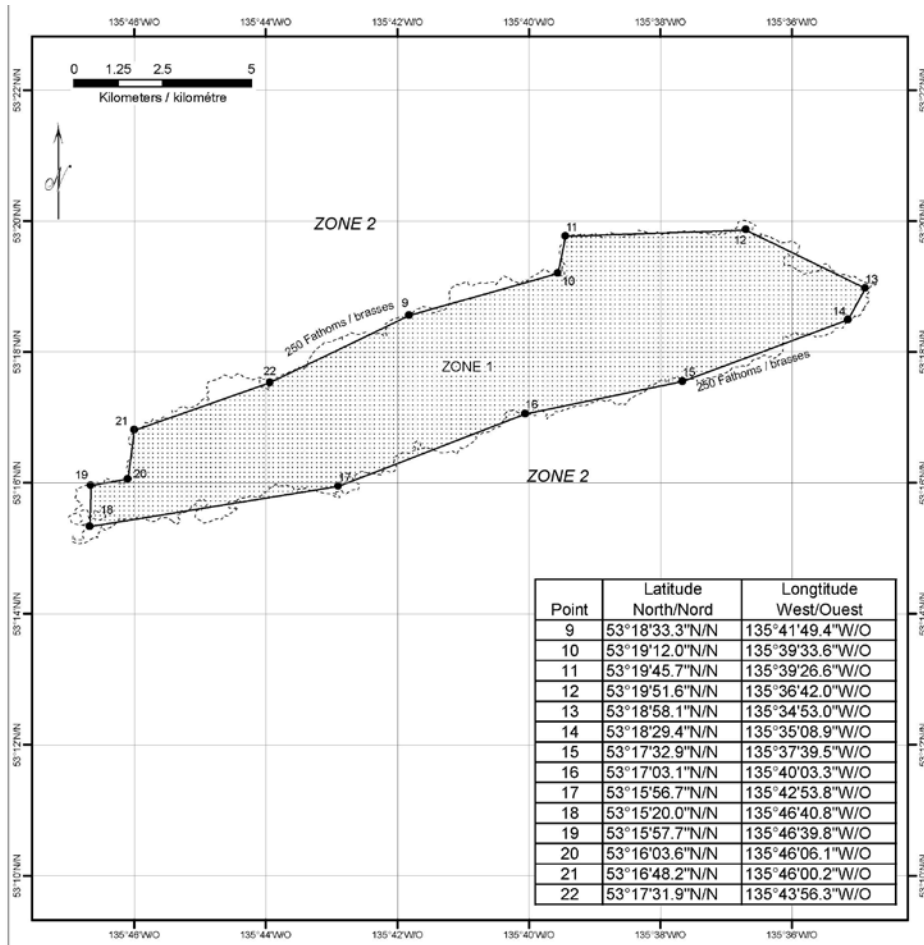


Figure 5. SGAan Kinghlas-Bowie Seamount Marine Protected Area Zones. Zone 1 coordinates are shown here in degrees-minutes-seconds (DMS-format), as per the format in the *Bowie Seamount Marine Protected Area Regulations, 2008*.

Appendix 8: 2016/2017 Groundfish Trawl Commercial Harvest Plan

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1. MANAGEMENT CHANGES AND REMINDERS FOR 2016/2017

Following is a summary of changes adopted for the Groundfish trawl fishery for the 2016/2017 season following consultation with the Groundfish Trawl Advisory Committee (GTAC). Refer to the specific section within the plan for details of these changes.

1.1. In-season Changes/Updates

In-season updates are available on the Fishery Notice website at: http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=commercial.

In-season Sector Catch and Sector Cap summaries are updated daily and can be found at: <http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.htm>

1.2. Offshore Pacific Hake Management Plan

Offshore Pacific hake management measures, including the Total allowable catch (TAC) for the 2016 season are not included in this document and will be released inseason in an addendum to this harvest plan.

1.3. Revised Total Allowable Catches

Based on updated current information, application of DFO's *Fishery Decision-Making Framework Incorporating the Precautionary Approach*, and consultation with interested parties, revised total allowable catch levels (TACs) have been established for Trawl sector for Sablefish, Longnose Skate, Big Skate, Arrowtooth Flounder, Pacific Cod in 5A/B and 5C/D and Yelloweye rockfish.

1.4. Eulachon Prohibition in the Groundfish Trawl Fishery

The prohibition on retention of Eulachon (*Thaleichthys pacificus*) by all groundfish trawl licenced vessels will continue for the 2016/2017 season.

1.5. Electronic Collection and Submission of Hail, Logbook, Catch and Landing Data

On October 8th, 2014, the groundfish trawl industry implemented a new data management platform that allows for electronic collection and submission of fishery information to DFO. This industry platform has been developed for use on tablets and personal computers. It includes elements to meet Hail, Fishing Logbook, At-Sea Observer and Dockside monitoring and data requirements consistent with groundfish trawl licence conditions, the IFMP rules governing the fishery operations, and data confidentiality requirements.

1.6. Bocaccio Rebuilding Measures

Based on updated science information, the Department introduced bocaccio catch reduction targets from 2012 catch levels of approximately 137 tonnes (inclusive of trawl, groundfish hook and line, salmon troll, and recreational sectors) to a mortality cap of 75 tonnes over a three year period in order to support stock rebuilding.

As a result of the annual review of groundfish industry's progress in achieving the targeted mortality cap, DFO and the groundfish trawl industry agreed to reductions in the trawl TAC to 110 tonnes for the 2015/2016 season and followed by a further reduction to 80 tonnes for the 2016/2017 season.

The Department and industry will continue to review the efficacy of these pilot measures at the end of each fishing season and consider any additional measures necessary to support

stock rebuilding. Please refer to section 9.1.5 of the IFM, section 11.5 of this harvest plan, and conditions of the groundfish trawl licence for further information and requirements.

1.7. Online Licencing

All fish harvesters/Licence Holders/vessel owners are now required to use the National Online Licensing System (NOLS) to view, pay for and print their commercial fishing licences, licence conditions and/or receipts.

Training materials, including step-by-step guides and a detailed user training manual, are available online (<http://www.dfo-mpo.gc.ca/FM-GP/SDC-CPS/licence-permis-eng.htm>) to guide users of the system in completing their licensing transactions. The Department also provides client support and assistance on how to use the system via e-mail at fishing-peche@dfo-mpo.gc.ca or by calling toll-free at 1-877-535-7307 (7:00 AM to 8:00 PM Eastern, Monday to Friday).

For more information on how to register and use the system, visit the Department's website [at the website address above](#), or contact our client support.

1.8. Strait of Georgia Sponge Reef Protection Measures

In 2015 DFO implemented fisheries closures for all bottom contact gear to protect nine glass sponges reefs found with the Strait of Georgia. The closures include the reefs and a 150 meter buffer zone that will provide protection of the glass sponge reefs. The coordinates of the closures and an illustration of the reef locations are located in Section 8.5 of this harvest plan. These closures are the result of extensive consultation with First Nations, commercial and recreational interests, and other stakeholders.

1.9. Commercial Management and Allocation of Big and Longnose Skates

Consistent with the Department's direction of explicit and transparent allocations and to further promote stewardship of skate species, consultation between DFO and groundfish fishing interests were initiated in 2013 to (1) establish total allowable catches (TACs) for these species in areas 3 C/D, 5A/B and 5C/D/E (2) strengthen commercial management measures, and (3) establish a commercial allocation formula that apportions the commercial TAC among commercial fisheries. These changes, necessary to support management objectives for these stocks, have been implemented over a two year period that began in 2015/16 and will fully adopted in the 2016/17 season. The 2016/2017 planned measures were the reduction to commercial TACs for Longnose Skate in each area and for Big Skate in Area 3C/D. Information on Sectoral allocation formulas and TACs are set out in section 9 of the IFMP. The Trawl specific allocations are set out in Section 11 of this harvest plan.

Management changes also transitioned Big and Longnose skate management to individual transferable quota in outside waters in the dogfish, trawl, halibut, sablefish, and outside rockfish fisheries. Individual trawl licence quota allocations were based on each licence's permanent quota holdings, excluding hake, at the start of the 2015/2016 fishing season.

2. APPLICATION

The management strategies and harvest levels contained in this plan apply to vessels operating under the authority of a 2016/2017 groundfish trawl licence off the west coast of Canada.

3. OPEN TIMES

With the exception of those seasonal and permanent closures noted in this plan, or closures announced in-season the groundfish trawl fishery will be open from February 21, 2016 to February 20, 2017. Information on in-season changes can be found by accessing the Department's Groundfish Internet site at:

<http://www.pac.dfo-mpo.gc.ca/fm-gp/commercial/ground-fond/index-eng.htm>

4. FISHING AREAS

Fishing is permitted coast wide with the exception of annual and season closures described in sections 5, 6, 7 and 8 below and those areas set out within in season variation orders issued by Fisheries and Oceans Canada. In-season changes are announced through the Fisheries Public Notices system that can be found at the Department's internet site:

<http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm>

5. SPECIES CLOSURES

The following species closures (non-retention) are in effect.

5.1. Lingcod

Closed year-round in Areas 12 to 20 and 29, (includes all of Johnstone Strait, Strait of Georgia and Juan de Fuca Strait).

5.2. Rockfish

Closed year-round in Areas 12 to 20 and 29, (includes all of Johnstone Strait, Strait of Georgia and Juan de Fuca Strait).

6. HABITAT CONSERVATION BOTTOM TRAWL OPEN AND CLOSED AREAS

On April 2, 2012 all Canadian Fisheries waters of the Pacific Ocean, except Areas 12 to 20 and 29, and those areas described in 6.1 but not including the closed areas set out in section 6.2, were closed to fishing with bottom trawl gear year round.

Those waters found within the areas described in section 6.1 and Areas 12 to 20 and 29 are open to bottom trawl fishing but are also subject to seasonal area and time closures set out in sections 7 and 8 below, those areas set out within inseason variation orders issued by Fisheries and Oceans Canada and restrictions set out by groundfish trawl licence conditions.

The intent of this closure is to “freeze the bottom trawl footprint” and implement the industry agreed upon habitat conservation measures for protection of corals and sponges in the Pacific Region groundfish trawl fishery. Details of the measures are set out in Section 18 of this plan.

6.1. Areas Open to Bottom Trawling

Those areas open to bottom trawling include;

The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
49° 59.809 N	127° 43.229 W	To
49° 53.888 N	127° 39.429 W	To
49° 47.009 N	127° 36.857 W	To
49° 46.648 N	127° 32.447 W	To
49° 42.351 N	127° 24.458 W	To
49° 42.125 N	127° 09.255 W	To
49° 33.404 N	126° 52.533 W	To
49° 22.832 N	126° 42.341 W	To
49° 22.063 N	126° 44.803 W	To
49° 16.977 N	126° 31.126 W	To
49° 12.761 N	126° 23.065 W	To
49° 01.174 N	126° 08.749 W	To
48° 59.315 N	126° 01.941 W	To
48° 53.013 N	125° 57.508 W	To
48° 50.187 N	126° 02.869 W	to
48° 40.616 N	125° 56.635 W	to
48° 39.580 N	126° 03.953 W	to
48° 32.282 N	126° 06.531 W	to
48° 27.959 N	126° 03.394 W	to
48° 27.126 N	125° 53.142 W	to
48° 22.176 N	125° 49.761 W	to
48° 21.819 N	125° 37.948 W	to
48° 25.525 N	125° 36.233 W	to
48° 28.736 N	125° 46.117 W	to
48° 38.893 N	125° 47.339 W	to
48° 43.008 N	125° 54.257 W	to
48° 45.763 N	125° 54.296 W	to
48° 47.041 N	125° 45.673 W	to
48° 46.597 N	125° 39.763 W	to
48° 46.817 N	125° 37.872 W	to
48° 50.508 N	125° 39.294 W	to
48° 50.046 N	125° 52.259 W	to
48° 59.401 N	125° 49.371 W	to
48° 59.928 N	125° 41.175 W	to
48° 56.459 N	125° 35.551 W	to
48° 51.113 N	125° 25.062 W	to
48° 43.139 N	125° 14.701 W	to
48° 40.495 N	124° 59.612 W	to
48° 40.055 N	124° 52.992 W	to
48° 36.186 N	124° 45.211 W	to
48° 35.510 N	124° 43.150 W	to
48° 29.631 N	124° 43.150 W	to
48° 30.051 N	124° 45.095 W	to
48° 30.319 N	124° 47.217 W	to
48° 30.402 N	124° 49.164 W	to
48° 30.356 N	124° 51.370 W	to

48° 30.050 N	124° 54.089 W	to
48° 29.579 N	124° 57.163 W	to
48° 28.630 N	125° 01.051 W	to
48° 27.678 N	125° 04.484 W	to
48° 26.944 N	125° 06.784 W	to
48° 25.441 N	125° 11.115 W	to
48° 24.593 N	125° 13.299 W	to
48° 22.587 N	125° 17.934 W	to
48° 21.029 N	125° 21.263 W	to
48° 19.867 N	125° 24.738 W	to
48° 18.945 N	125° 28.268 W	to
48° 17.879 N	125° 32.336 W	to
48° 16.897 N	125° 35.784 W	to
48° 14.405 N	125° 43.311 W	to
48° 13.269 N	125° 46.384 W	to
48° 11.763 N	125° 50.270 W	to
48° 10.544 N	125° 53.663 W	to
48° 10.626 N	125° 55.597 W	to
48° 13.868 N	125° 56.102 W	to
48° 12.664 N	126° 00.427 W	to
48° 13.286 N	126° 02.020 W	to
48° 15.002 N	126° 00.618 W	to
48° 17.494 N	126° 02.081 W	to
48° 20.205 N	126° 00.343 W	to
48° 20.245 N	125° 55.877 W	to
48° 20.581 N	125° 54.903 W	to
48° 20.878 N	125° 55.008 W	to
48° 21.041 N	125° 54.208 W	to
48° 21.353 N	125° 53.594 W	to
48° 21.545 N	125° 53.613 W	to
48° 21.880 N	125° 54.126 W	to
48° 22.288 N	125° 52.993 W	to
48° 22.448 N	125° 53.096 W	to
48° 22.471 N	125° 53.957 W	to
48° 22.566 N	125° 55.954 W	to
48° 23.460 N	125° 55.366 W	to
48° 23.629 N	125° 56.074 W	to
48° 21.951 N	125° 57.530 W	to
48° 21.111 N	125° 58.360 W	to
48° 20.663 N	126° 00.056 W	to
48° 19.270 N	126° 03.511 W	to
48° 18.739 N	126° 06.761 W	to
48° 18.684 N	126° 10.750 W	to
48° 21.061 N	126° 11.770 W	to
48° 21.126 N	126° 14.451 W	to
48° 26.118 N	126° 20.174 W	to
48° 29.126 N	126° 22.016 W	to
48° 33.379 N	126° 20.178 W	to
48° 34.467 N	126° 23.048 W	to
48° 40.353 N	126° 27.916 W	to

48° 40.543 N	126° 31.921 W	to
48° 42.725 N	126° 35.986 W	to
48° 44.768 N	126° 38.362 W	to
48° 45.685 N	126° 40.717 W	to
48° 48.664 N	126° 43.985 W	to
48° 52.138 N	126° 41.271 W	to
48° 51.742 N	126° 44.543 W	to
48° 53.256 N	126° 48.816 W	to
48° 52.156 N	126° 55.684 W	to
48° 57.252 N	126° 57.647 W	to
49° 01.290 N	127° 00.513 W	to
49° 03.862 N	127° 01.422 W	to
49° 06.191 N	127° 03.120 W	to
49° 07.635 N	127° 06.958 W	to
49° 10.438 N	127° 09.581 W	to
49° 13.031 N	127° 08.704 W	to
49° 17.868 N	127° 13.994 W	to
49° 22.002 N	127° 20.499 W	to
49° 24.518 N	127° 21.276 W	to
49° 26.396 N	127° 23.957 W	to
49° 28.473 N	127° 30.164 W	to
49° 30.533 N	127° 27.433 W	to
49° 31.898 N	127° 30.217 W	to
49° 28.077 N	127° 39.588 W	to
49° 31.783 N	127° 41.843 W	to
49° 32.573 N	127° 43.864 W	to
49° 37.243 N	127° 45.631 W	to
49° 37.822 N	127° 47.190 W	to
49° 40.544 N	127° 48.462 W	to
49° 45.440 N	127° 47.395 W	to
49° 44.699 N	127° 49.937 W	to
49° 49.856 N	128° 00.322 W	to
49° 53.598 N	128° 01.591 W	to
49° 57.176 N	128° 08.093 W	to
49° 59.447 N	128° 11.103 W	to
49° 59.375 N	128° 08.656 W	to
49° 55.224 N	128° 01.460 W	to
49° 55.539 N	127° 59.073 W	to
49° 56.421 N	127° 59.161 W	to
49° 57.492 N	127° 58.095 W	to
49° 57.929 N	127° 55.615 W	to
49° 57.928 N	127° 55.615 W	to
49° 58.634 N	127° 53.415 W	to
49° 57.570 N	127° 48.395 W	to
49° 58.406 N	127° 46.679 W	to
49° 59.707 N	127° 46.067 W	then back to the starting point at
49° 59.809 N	127° 43.229 W	
The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
50° 38.618 N	128° 23.065 W	to

50° 35.471 N	128° 18.171 W	to
50° 29.032 N	128° 18.023 W	to
50° 28.974 N	128° 15.804 W	to
50° 27.337 N	128° 15.830 W	to
50° 25.800 N	128° 11.004 W	to
50° 24.400 N	128° 01.542 W	to
50° 22.383 N	128° 01.169 W	to
50° 21.363 N	128° 06.377 W	to
50° 10.412 N	128° 03.688 W	to
50° 06.562 N	127° 58.430 W	to
50° 05.853 N	128° 00.459 W	to
50° 06.917 N	128° 02.523 W	to
50° 08.695 N	128° 05.470 W	to
50° 10.836 N	128° 07.862 W	to
50° 14.931 N	128° 07.572 W	to
50° 18.050 N	128° 17.465 W	to
50° 19.418 N	128° 19.306 W	to
50° 19.612 N	128° 26.330 W	to
50° 21.594 N	128° 28.965 W	to
50° 24.326 N	128° 29.531 W	to
50° 27.319 N	128° 33.495 W	to
50° 26.724 N	128° 35.989 W	to
50° 32.725 N	128° 36.957 W	to
50° 32.263 N	128° 39.454 W	to
50° 34.931 N	128° 41.332 W	to
50° 34.762 N	128° 45.516 W	to
50° 37.004 N	128° 47.791 W	to
50° 39.490 N	128° 53.501 W	to
50° 42.471 N	129° 01.154 W	to
50° 43.871 N	128° 58.204 W	to
50° 43.382 N	128° 54.963 W	to
50° 42.505 N	128° 44.999 W	to
50° 37.421 N	128° 38.210 W	to
50° 38.763 N	128° 30.162 W	to
50° 42.195 N	128° 30.926 W	to
50° 44.375 N	128° 28.568 W	to
50° 45.137 N	128° 25.804 W	then back to the starting point at
50° 38.618 N	128° 23.065 W	
The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
50° 44.881 N	129° 20.011 W	to
50° 44.874 N	129° 22.292 W	to
50° 48.362 N	129° 25.674 W	to
50° 51.571 N	129° 37.166 W	to
50° 54.971 N	129° 35.183 W	to
50° 58.318 N	129° 32.185 W	to
50° 57.793 N	129° 30.065 W	to
50° 54.210 N	129° 32.539 W	to
50° 50.452 N	129° 19.559 W	to
50° 46.537 N	129° 17.162 W	then back to the starting point at

50° 44.881 N	129° 20.011 W	
The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
51° 02.273 N	127° 50.163 W	to
51° 02.072 N	127° 55.343 W	to
51° 04.116 N	127° 56.344 W	to
51° 04.497 N	127° 52.645 W	then back to the starting point at
51° 02.273 N	127° 50.163 W	
The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
51° 07.405 N	129° 56.915 W	to
51° 07.270 N	130° 04.351 W	to
51° 09.836 N	130° 08.498 W	to
51° 15.873 N	130° 10.331 W	to
51° 21.286 N	130° 11.087 W	to
51° 23.380 N	130° 05.740 W	to
51° 25.938 N	130° 03.154 W	to
51° 25.898 N	129° 59.662 W	to
51° 23.877 N	129° 57.199 W	to
51° 18.293 N	129° 55.567 W	to
51° 16.561 N	129° 51.884 W	to
51° 14.076 N	129° 49.987 W	then back to the starting point at
51° 07.405 N	129° 56.915 W	
The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
51° 59.143 N	131° 12.671 W	to
51° 58.833 N	131° 15.927 W	to
52° 01.643 N	131° 20.418 W	to
52° 03.820 N	131° 22.520 W	to
52° 06.049 N	131° 21.160 W	then back to the starting point at
51° 59.143 N	131° 12.671 W	
The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
52° 07.470 N	131° 30.193 W	to
52° 06.309 N	131° 33.328 W	to
52° 08.119 N	131° 35.370 W	to
52° 10.819 N	131° 35.365 W	to
52° 09.689 N	131° 30.156 W	then back to the starting point at
52° 07.470 N	131° 30.193 W	
The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
51° 54.657 N	129° 41.313 W	to
51° 52.686 N	129° 38.069 W	to
51° 53.976 N	129° 30.228 W	to
51° 50.454 N	129° 26.740 W	to
51° 58.380 N	129° 09.881 W	to
51° 56.471 N	129° 02.365 W	to
51° 48.494 N	129° 17.570 W	to
51° 47.337 N	129° 01.050 W	to
51° 40.707 N	129° 00.811 W	to

51° 40.134 N	129° 13.986 W	to
51° 34.503 N	129° 22.756 W	to
51° 38.199 N	129° 30.287 W	to
51° 39.067 N	129° 36.221 W	to
51° 37.268 N	129° 50.466 W	to
51° 33.959 N	130° 00.194 W	to
51° 34.818 N	130° 01.657 W	to
51° 37.358 N	129° 56.351 W	to
51° 43.221 N	130° 05.574 W	to
51° 42.662 N	130° 08.050 W	to
51° 44.182 N	130° 10.818 W	to
51° 42.925 N	130° 18.257 W	to
51° 41.201 N	130° 20.815 W	to
51° 39.513 N	130° 20.291 W	to
51° 35.575 N	130° 23.132 W	to
51° 34.548 N	130° 28.777 W	to
51° 36.948 N	130° 31.222 W	to
51° 39.863 N	130° 28.002 W	to
51° 42.404 N	130° 31.708 W	to
51° 42.745 N	130° 28.443 W	to
51° 47.890 N	130° 22.202 W	to
51° 44.696 N	130° 17.952 W	to
51° 49.676 N	130° 06.443 W	to
51° 53.287 N	129° 48.197 W	to
51° 56.775 N	129° 44.206 W	to
52° 06.966 N	129° 51.434 W	to
52° 10.685 N	129° 46.233 W	to
52° 12.648 N	129° 38.233 W	to
52° 08.109 N	129° 32.781 W	then back to the starting point at
51° 54.657 N	129° 41.313 W	

The area bounded by a line starting at the following coordinates:

Latitude	Longitude	
52° 03.954 N	128° 55.336 W	to
51° 59.325 N	128° 48.224 W	to
51° 59.325 N	128° 48.217 W	to
51° 55.078 N	128° 43.224 W	to
51° 54.560 N	128° 42.789 W	to
51° 54.831 N	128° 34.145 W	to
51° 47.559 N	128° 28.370 W	to
51° 42.017 N	128° 32.314 W	to
51° 35.503 N	128° 32.278 W	to
51° 33.385 N	128° 25.300 W	to
51° 30.791 N	128° 25.029 W	to
51° 30.936 N	128° 16.918 W	to
51° 22.691 N	128° 24.020 W	to
51° 18.696 N	128° 36.181 W	to
51° 18.696 N	128° 36.185 W	to
51° 15.841 N	128° 33.789 W	to
51° 15.841 N	128° 33.786 W	to

51° 08.117 N	128° 18.781 W	to
51° 06.956 N	128° 06.138 W	to
51° 02.091 N	127° 59.009 W	to
50° 56.652 N	127° 45.913 W	to
50° 55.973 N	127° 47.533 W	to
50° 58.632 N	127° 54.176 W	to
50° 59.414 N	128° 12.697 W	to
50° 52.745 N	128° 18.208 W	to
50° 49.565 N	128° 26.843 W	to
50° 49.452 N	128° 29.840 W	to
50° 55.430 N	128° 38.581 W	to
51° 00.068 N	128° 47.466 W	to
51° 04.941 N	128° 49.553 W	to
51° 07.224 N	128° 54.267 W	to
51° 10.198 N	128° 57.983 W	to
51° 10.071 N	129° 03.818 W	to
51° 06.393 N	129° 12.352 W	to
51° 03.100 N	129° 14.444 W	to
51° 01.443 N	129° 19.750 W	to
51° 01.644 N	129° 20.516 W	to
51° 04.094 N	129° 27.966 W	to
51° 20.925 N	129° 35.038 W	to
51° 23.104 N	129° 28.698 W	to
51° 25.763 N	129° 28.018 W	to
51° 30.246 N	129° 29.786 W	to
51° 29.482 N	129° 07.998 W	to
51° 31.113 N	128° 44.081 W	to
51° 36.092 N	128° 37.655 W	to
51° 41.088 N	128° 37.919 W	to
51° 45.335 N	128° 41.349 W	to
51° 54.335 N	128° 52.021 W	to
51° 53.705 N	128° 55.702 W	to
51° 56.489 N	129° 01.939 W	to
51° 59.270 N	128° 56.308 W	to
51° 59.270 N	128° 56.294 W	to
52° 04.081 N	129° 03.223 W	to
52° 11.441 N	129° 00.681 W	to
52° 14.861 N	128° 48.680 W	to
52° 13.823 N	128° 47.385 W	then back to the starting point at
52° 03.954 N	128° 55.336 W	

The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
52° 35.054 N	130° 55.583 W	to
52° 31.670 N	130° 59.281 W	to
52° 32.736 N	131° 07.172 W	to
52° 36.195 N	131° 19.911 W	to
52° 40.922 N	131° 22.686 W	to
52° 38.800 N	131° 12.817 W	to
52° 37.056 N	130° 53.908 W	then back to the starting point at

52° 35.054 N	130° 55.583 W	
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The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
52° 33.275 N	129° 48.114 W	to
52° 33.182 N	129° 51.995 W	to
52° 41.577 N	129° 51.656 W	to
52° 42.199 N	129° 47.267 W	then back to the starting point at
52° 33.275 N	129° 48.114 W	

The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
52° 50.520 N	131° 15.200 W	to
52° 48.390 N	131° 16.876 W	to
52° 49.533 N	131° 21.444 W	to
52° 51.596 N	131° 24.032 W	to
52° 58.323 N	131° 15.551 W	to
52° 57.147 N	131° 12.567 W	to
52° 54.053 N	131° 15.026 W	then back to the starting point at
52° 50.520 N	131° 15.200 W	

The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
54° 18.674 N	130° 59.623 W	to
54° 03.706 N	130° 59.758 W	to
54° 01.410 N	131° 01.233 W	to
53° 50.284 N	130° 46.679 W	to
53° 46.895 N	130° 38.094 W	to
53° 41.169 N	130° 34.886 W	to
53° 36.807 N	130° 42.034 W	to
53° 33.471 N	130° 41.479 W	to
53° 29.299 N	130° 46.640 W	to
53° 24.501 N	130° 48.819 W	to
53° 21.670 N	130° 53.451 W	to
53° 16.566 N	130° 53.644 W	to
53° 14.010 N	130° 56.597 W	to
53° 07.703 N	130° 52.037 W	to
53° 07.840 N	130° 38.801 W	to
53° 04.241 N	130° 32.833 W	to
53° 03.996 N	130° 25.745 W	to
53° 07.288 N	130° 23.075 W	to
53° 04.267 N	130° 16.592 W	to
52° 57.877 N	130° 11.972 W	to
52° 52.193 N	130° 11.815 W	to
52° 43.435 N	130° 17.773 W	to
52° 30.892 N	130° 17.814 W	to
52° 31.777 N	130° 13.179 W	to
52° 20.299 N	130° 06.992 W	to
52° 26.107 N	129° 57.704 W	to
52° 27.833 N	129° 55.136 W	to

52° 29.171 N	129° 51.013 W	to
52° 26.752 N	129° 49.664 W	to
52° 25.312 N	129° 52.347 W	to
52° 15.127 N	129° 47.347 W	to
52° 18.012 N	130° 00.909 W	to
52° 05.301 N	130° 01.052 W	to
51° 56.240 N	130° 13.023 W	to
51° 48.290 N	130° 28.186 W	to
51° 43.047 N	130° 32.729 W	to
51° 43.462 N	130° 39.072 W	to
51° 39.030 N	130° 39.045 W	to
51° 36.642 N	130° 39.769 W	to
51° 36.397 N	130° 40.729 W	to
51° 37.470 N	130° 42.885 W	to
51° 40.987 N	130° 48.131 W	to
51° 45.587 N	130° 53.435 W	to
51° 47.857 N	130° 52.721 W	to
51° 52.003 N	130° 49.651 W	to
51° 56.272 N	130° 49.419 W	to
52° 04.297 N	130° 54.902 W	to
52° 07.655 N	130° 54.095 W	to
52° 11.891 N	130° 55.909 W	to
52° 14.847 N	130° 59.171 W	to
52° 23.835 N	131° 01.762 W	to
52° 27.415 N	130° 52.618 W	to
52° 17.901 N	130° 45.940 W	to
52° 12.105 N	130° 47.616 W	to
52° 06.160 N	130° 42.488 W	to
52° 05.566 N	130° 37.171 W	to
52° 11.708 N	130° 34.400 W	to
52° 21.956 N	130° 30.939 W	to
52° 27.801 N	130° 31.550 W	to
52° 49.195 N	130° 25.811 W	to
52° 56.149 N	130° 24.656 W	to
52° 56.915 N	130° 30.357 W	to
52° 53.680 N	130° 34.807 W	to
52° 54.575 N	130° 48.256 W	to
52° 58.778 N	130° 57.436 W	to
52° 59.189 N	131° 02.858 W	to
52° 57.056 N	131° 05.250 W	to
52° 57.813 N	131° 09.718 W	to
53° 06.218 N	131° 11.945 W	to
53° 17.027 N	131° 16.633 W	to
53° 16.048 N	131° 34.140 W	to
53° 21.923 N	131° 34.480 W	to
53° 27.367 N	131° 13.805 W	to
53° 35.051 N	131° 12.736 W	to
53° 49.320 N	131° 18.715 W	to
53° 51.369 N	131° 14.600 W	to
54° 09.886 N	131° 16.360 W	to

54° 13.834 N	131° 26.361 W	to
54° 06.417 N	132° 05.342 W	to
54° 09.146 N	132° 36.464 W	to
54° 09.038 N	132° 48.139 W	to
54° 11.352 N	132° 59.334 W	to
54° 16.410 N	133° 00.681 W	to
54° 16.767 N	133° 07.434 W	to
54° 11.731 N	133° 17.490 W	to
54° 06.217 N	133° 21.902 W	to
54° 02.313 N	133° 32.437 W	to
53° 54.732 N	133° 27.077 W	to
53° 43.318 N	133° 16.558 W	to
53° 38.039 N	133° 09.688 W	to
53° 31.137 N	133° 06.062 W	to
53° 07.009 N	132° 38.867 W	to
52° 59.038 N	132° 28.492 W	to
52° 58.062 N	132° 33.354 W	to
53° 04.998 N	132° 42.761 W	to
53° 09.515 N	132° 48.423 W	to
53° 09.829 N	132° 50.391 W	to
53° 11.663 N	132° 54.574 W	to
53° 13.697 N	133° 03.954 W	to
53° 16.739 N	133° 10.024 W	to
53° 25.181 N	133° 10.905 W	to
53° 25.602 N	133° 11.551 W	to
53° 26.500 N	133° 11.695 W	to
53° 27.245 N	133° 11.521 W	to
53° 27.898 N	133° 11.640 W	to
53° 28.745 N	133° 12.302 W	to
53° 29.794 N	133° 12.819 W	to
53° 31.938 N	133° 15.788 W	to
53° 35.386 N	133° 19.006 W	to
53° 39.269 N	133° 21.505 W	to
53° 40.714 N	133° 21.516 W	to
53° 41.780 N	133° 20.658 W	to
53° 43.756 N	133° 22.302 W	to
53° 44.552 N	133° 23.805 W	to
53° 50.006 N	133° 31.239 W	to
53° 51.217 N	133° 34.287 W	to
53° 57.264 N	133° 39.178 W	to
54° 08.455 N	133° 46.760 W	to
54° 09.051 N	133° 49.089 W	to
54° 18.663 N	133° 57.429 W	to
54° 20.646 N	133° 49.765 W	to
54° 16.330 N	133° 46.417 W	to
54° 16.714 N	133° 38.740 W	to
54° 23.088 N	133° 27.276 W	to
54° 26.473 N	133° 11.763 W	to
54° 21.057 N	133° 03.399 W	to
54° 20.545 N	132° 58.854 W	to

54° 24.518 N	132° 51.692 W	to
54° 22.254 N	132° 46.119 W	to
54° 18.379 N	132° 49.812 W	to
54° 18.038 N	132° 38.386 W	to
54° 15.682 N	132° 21.606 W	to
54° 18.606 N	131° 59.533 W	to
54° 23.291 N	131° 45.403 W	to
54° 24.546 N	131° 30.007 W	to
54° 27.791 N	131° 24.281 W	to
54° 30.901 N	131° 24.237 W	to
54° 35.278 N	131° 30.067 W	to
54° 40.095 N	131° 30.095 W	to
54° 40.145 N	131° 23.463 W	to
54° 34.702 N	131° 15.228 W	to
54° 31.897 N	130° 58.421 W	to
54° 21.867 N	131° 02.980 W	then back to the starting point at
54° 18.674 N	130° 59.623 W	

6.2. Areas Closed to Bottom Trawling

The following areas found within the area open for bottom trawling set out in 6.1 above are closed year round to bottom trawling. Please note that all graphic contained in the harvest plan are for illustration purposes only.

The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
49° 55.826 N	127° 56.782 W	to
49° 54.659 N	127° 52.063 W	to
49° 51.630 N	127° 48.329 W	to
49° 46.748 N	127° 49.226 W	to
49° 46.785 N	127° 45.893 W	to
49° 44.315 N	127° 39.851 W	to
49° 50.260 N	127° 45.337 W	to
49° 53.085 N	127° 45.844 W	to
49° 53.246 N	127° 48.890 W	to
49° 55.564 N	127° 49.078 W	to
49° 56.900 N	127° 56.246 W	then back to the starting point at
49° 55.826 N	127° 56.782 W	

The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
49° 45.317 N	127° 37.786 W	to
49° 44.162 N	127° 39.424 W	to
49° 41.972 N	127° 34.672 W	to
49° 39.943 N	127° 30.293 W	to
49° 35.788 N	127° 24.757 W	to
49° 33.471 N	127° 19.337 W	to
49° 31.809 N	127° 18.780 W	to
49° 29.887 N	127° 16.880 W	to
49° 27.190 N	127° 16.729 W	to

49° 27.378 N	127° 15.044 W	to
49° 30.106 N	127° 15.126 W	to
49° 32.366 N	127° 17.045 W	to
49° 34.753 N	127° 17.787 W	to
49° 36.086 N	127° 22.858 W	to
49° 36.737 N	127° 23.987 W	to
49° 37.638 N	127° 25.436 W	to
49° 40.461 N	127° 25.514 W	to
49° 41.460 N	127° 29.144 W	to
49° 42.804 N	127° 30.855 W	to
49° 42.287 N	127° 34.119 W	to
49° 43.551 N	127° 35.120 W	to
49° 45.631 N	127° 35.552 W	then back to the starting point at
49° 45.317 N	127° 37.786 W	

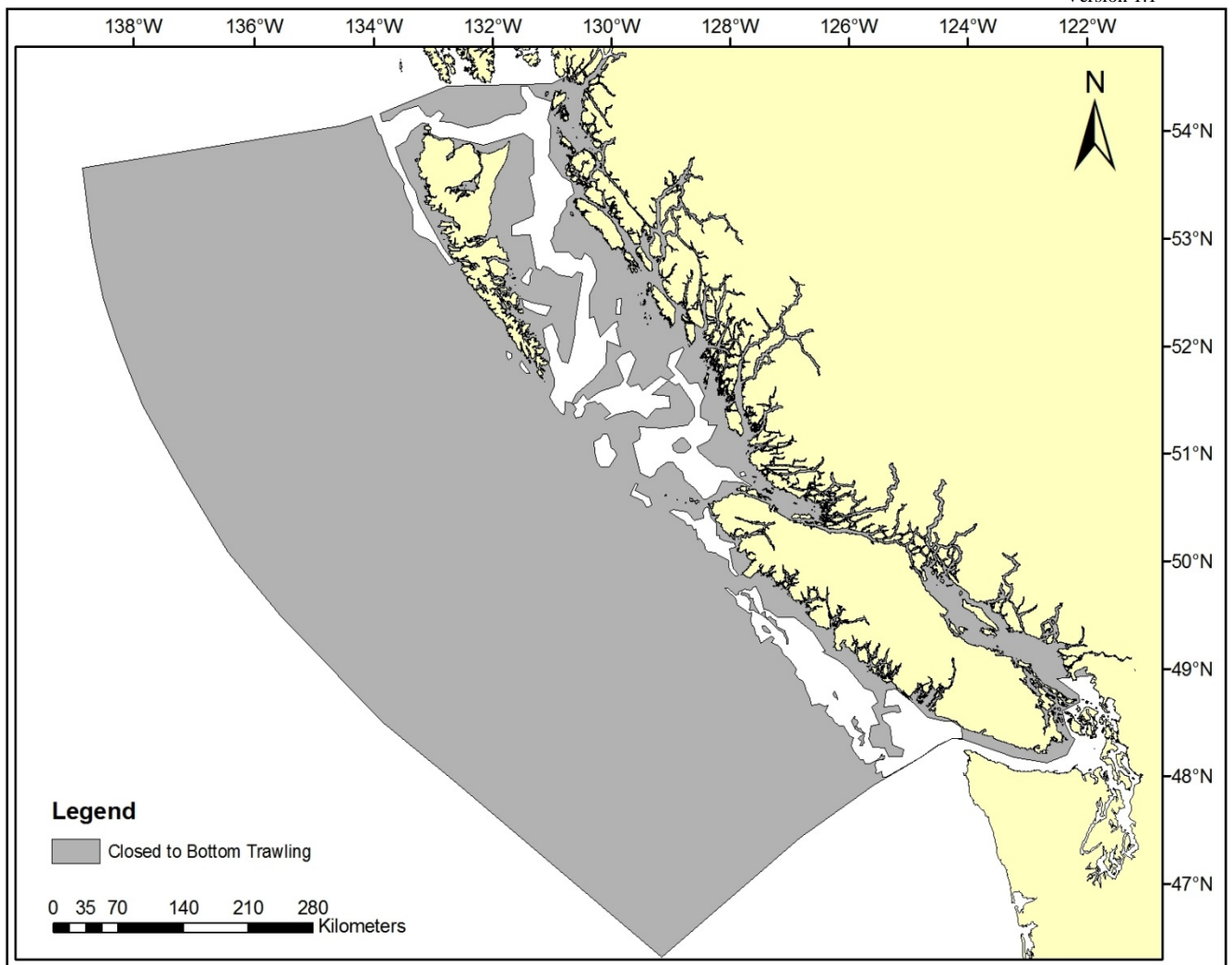
The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
49° 35.186 N	127° 31.480 W	to
49° 37.537 N	127° 35.559 W	to
49° 37.539 N	127° 37.938 W	to
49° 36.244 N	127° 37.918 W	to
49° 34.738 N	127° 35.929 W	to
49° 33.678 N	127° 32.327 W	to
49° 33.698 N	127° 31.097 W	then back to the starting point at
49° 35.186 N	127° 31.480 W	

The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
48° 56.083 N	126° 33.513 W	to
48° 55.163 N	126° 32.844 W	to
48° 57.506 N	126° 33.085 W	to
49° 00.099 N	126° 35.561 W	to
48° 58.766 N	126° 36.837 W	to
48° 57.172 N	126° 36.151 W	to
48° 56.415 N	126° 34.551 W	then back to the starting point at
48° 56.083 N	126° 33.513 W	

The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
48° 31.255 N	126° 12.828 W	to
48° 28.864 N	126° 15.021 W	to
48° 28.820 N	126° 11.931 W	to
48° 29.806 N	126° 12.056 W	to
48° 30.079 N	126° 11.010 W	to
48° 32.374 N	126° 11.017 W	to
48° 34.773 N	126° 10.434 W	to
48° 35.707 N	126° 09.618 W	to
48° 36.260 N	126° 11.520 W	to
48° 37.354 N	126° 12.403 W	to
48° 38.846 N	126° 13.715 W	to

48° 38.439 N	126° 15.356 W	to
48° 39.679 N	126° 16.143 W	to
48° 39.787 N	126° 18.207 W	to
48° 40.872 N	126° 16.169 W	to
48° 41.871 N	126° 15.574 W	to
48° 43.188 N	126° 15.818 W	to
48° 44.175 N	126° 18.513 W	to
48° 45.203 N	126° 17.872 W	to
48° 45.366 N	126° 18.449 W	to
48° 42.664 N	126° 21.652 W	to
48° 38.227 N	126° 18.146 W	to
48° 35.258 N	126° 10.986 W	to
48° 32.969 N	126° 15.921 W	then back to the starting point at
48° 31.255 N	126° 12.828 W	

The area bounded by a line starting at the following coordinates:		
Latitude	Longitude	
51° 17.465 N	128° 57.991 W	to
51° 15.444 N	128° 54.555 W	to
51° 15.435 N	128° 47.419 W	to
51° 16.255 N	128° 45.313 W	to
51° 16.255 N	128° 45.309 W	to
51° 18.251 N	128° 41.868 W	to
51° 18.587 N	128° 41.816 W	to
51° 19.585 N	128° 41.810 W	to
51° 23.870 N	128° 48.215 W	to
51° 23.915 N	128° 50.433 W	to
51° 20.020 N	128° 58.581 W	then back to the starting point at
51° 17.465 N	128° 57.991 W	



The above graphic is for illustration purposes only.

7. IN-SEASON GROUND FISH TRAWL CLOSURES - OUTSIDE WATERS

In addition to the closures set within section 6 the following area closures are also in effect for all trawl vessels during the 2016/2017 season. The closures described may change in-season and fishers are reminded to refer to current Fisheries Public Notices prior to conducting any fishing activity. A full description of Areas and Subareas referenced on these figures can be found in *the Pacific Fishery Management Area Regulations*. The illustrations set out below are for information purposes only.

7.1. Rockfish Conservation Areas

Currently there are 164 Rockfish Conservation Areas (RCAs) in effect and are outlined in the Rockfish Conservation Areas booklet. These booklets are available at any PFLU or can be downloaded from the Department's internet site at:

<http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/species-especies/conservation-eng.htm>

7.2. Gwaii Haanas National Marine Conservation Area

Commercial and recreational fishers and harvesters are reminded that extraction of any kind (e.g., fishing, kelp harvest) is not permitted in the areas of the National Marine Conservation Area described below:

7.2.1. Burnaby Narrows

Those waters of Subareas 2-13 and 2-16 inside a line:		
commencing at	52°23.049 N	131°23.438 W
then east to	52°23.077 N	131°22.908 W
following the southern shoreline of Kat Island east to	52°23.107 N	131°22.274 W
then east to	52°23.295 N	131°21.34 W
following the western shoreline of Burnaby Island south to	52°20.951 N	131°20.509 W
then west to	52°20.733 N	131°21.072 W
then north following the eastern shoreline of Moresby Island back to the point of commencement.		

7.2.2. Louscoone Estuary

Those waters of Subareas 2-33 and 2-34 north of a line:		
drawn from	52°11.836 N	131°15.658 W
then true east to	52°12.271 N	131°14.594 W

7.2.3. Flamingo Estuary

Those waters of Subarea 2-37 north of a line:		
drawn from	52°14.456 N	131°22.234 W
then southeast to	52°14.246 N	131°21.489 W

7.2.4. Gowgaia Estuary

Those waters of Subarea 2-41 east of a line:		
drawn from	52°24.944 N	131°32.138 W
then southeast to	52°24.238 N	131°32.024 W

7.2.5. Cape Saint James

Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line:		
commencing at	51°56.523 N	131°01.522 W
then southwest to	51°55.627 N	131°02.574 W
then southeast to	51°52.5 N	130°57.919 W
then south to	51°51.676 N	130°57.805 W
then southeast to	51°50.349 N	130°56.442 W
then northeast to	51°51.062 N	130°54.717 W
then north to	51°53.888 N	130°55.608 W
then northwest to	51°58.671 N	130°59.464 W
then west to	51°58.743 N	131°00.606 W
and then following the southern shore of Kungit Island to the point of commencement.		

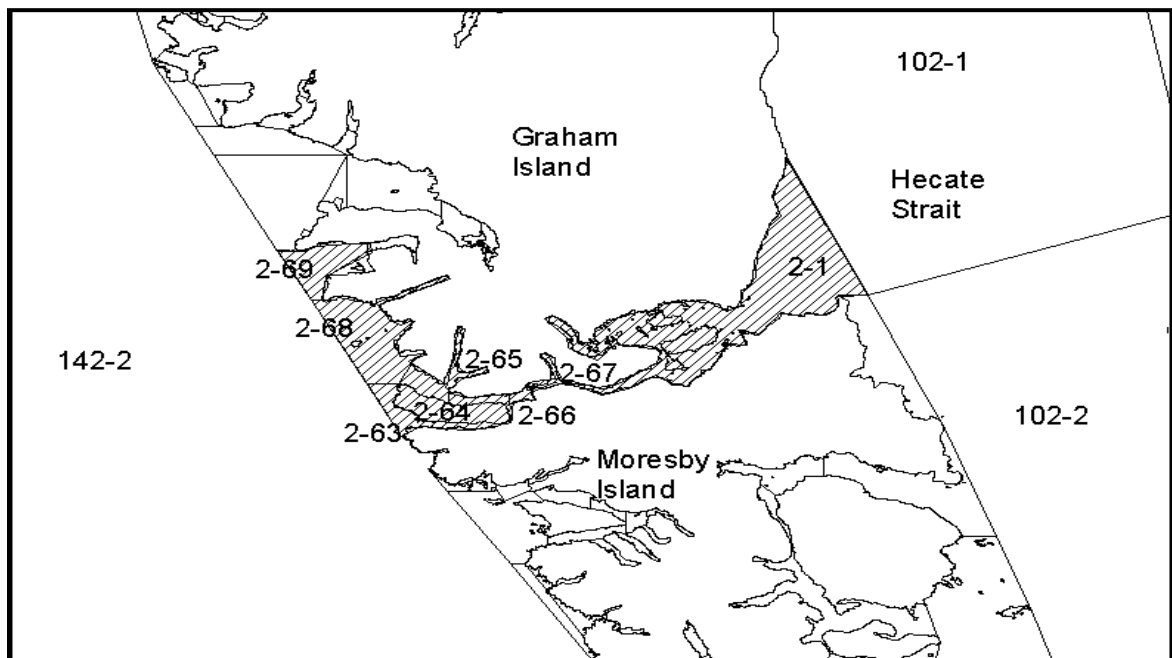
7.2.6. SGang Gwaay

Those waters of Subareas 2-31 and 142-1 inside a 3 km radius from the centre point on Anthony Island located at:	52°05.655 N	131°13.178 W
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For more background information on the National Marine Conservation Area please see IFMP section 8.4.

7.3. Haida Gwaii

Closed to all trawling (includes both bottom and midwater gear) year-round in Subareas 2-1, 2-63 to 2-68 and those portions of Subarea 2-69 commencing at Fame Point in position 53 deg 17.060 min N 132 deg 42.415 min W then to 53 deg 17.060 min N 132 deg 43.800 min W then to 53 deg 16.350 min N 132 deg 44.700 min W then to 53 deg 15.208 min N 132 deg 43.597 min (abuts the boundary of 2-68) then to Hunter Point 53 deg 15.208 min N 132 deg 42 .984 min W. The intent of the closure is to reduce harvesting pressure on localized stocks of fish and to provide improved access to food, social and ceremonial fish for the Haida First Nations.



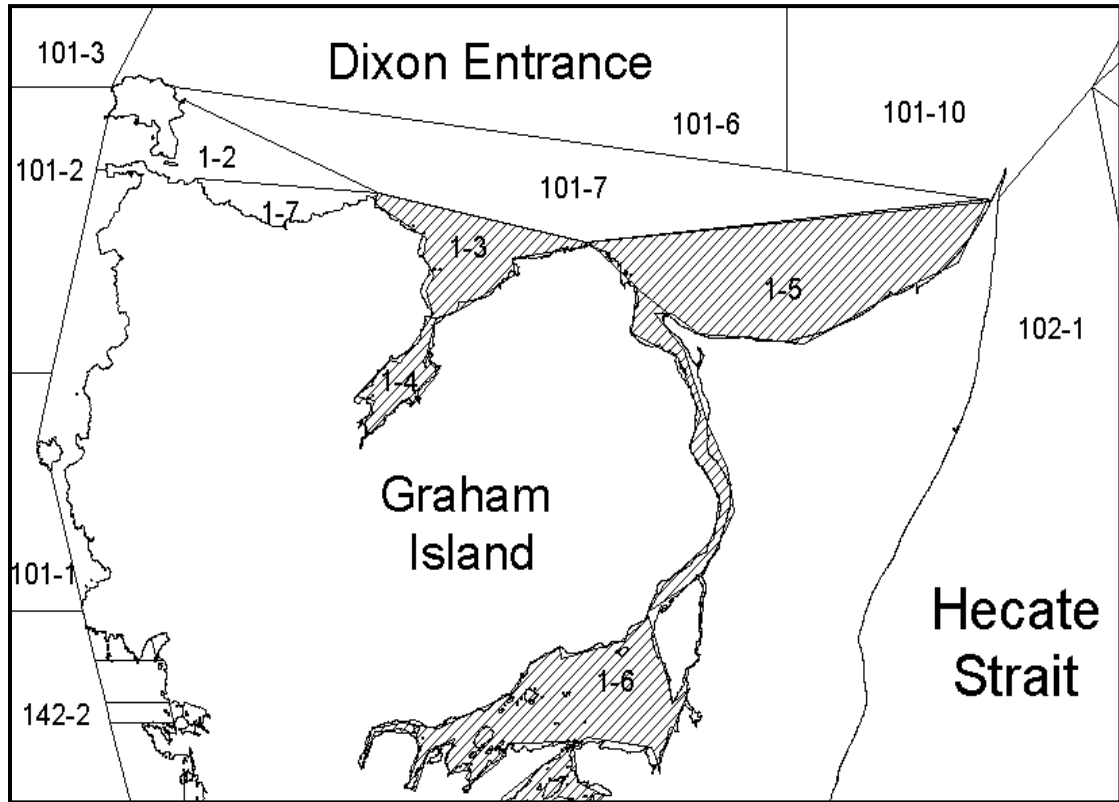
7.4. Glass Sponge Reef Closures

The coastwide bottom trawl closures set out in Section 6 included the existing three glass sponge reef closed areas located in waters of the Eastern Queen Charlotte Sound and Hecate Strait.

These unique sponge reef areas have been identified for designation as a Marine Protected Area (MPA) in the near future. In the interim, Fisheries and Oceans Canada will continue to monitor fishing activity, in particular mid-water trawling, over the reefs and in adjacent areas. Should it be determined that current activities create additional concerns for the overall protection of the reefs, additional management measures may be implemented inseason.

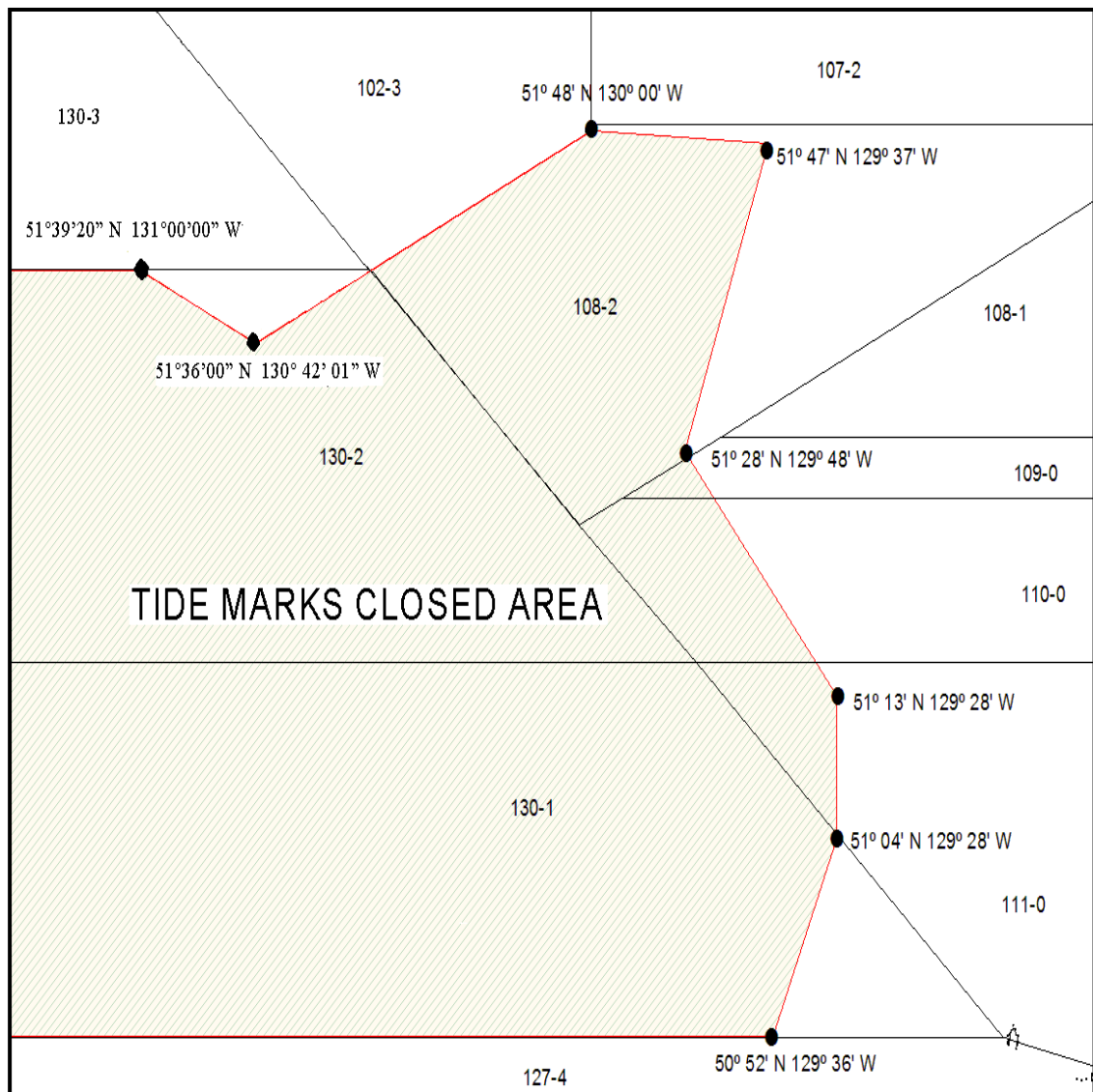
7.5. McIntyre Bay/Masset

Closed to all trawling (includes both bottom and midwater) year-round in Subareas 1-3, 1-4, 1-5 and 1-6. The intent of this closure is to reduce harvesting pressure on localized stocks of fish, minimize the catch of juvenile halibut, and to provide improved access to food, social, and ceremonial fisheries for First Nations.



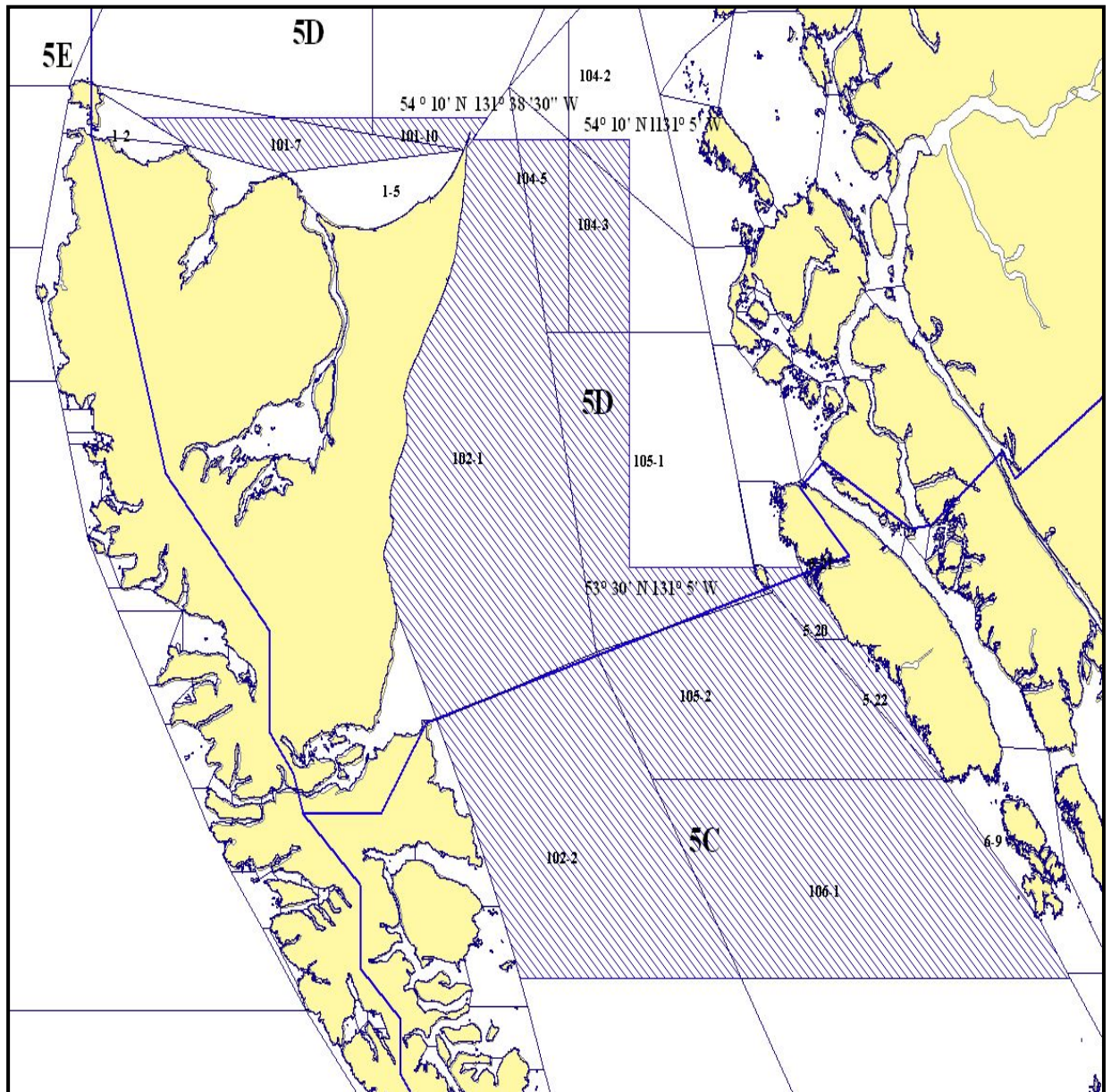
7.6. Tide Marks

Closed to all trawling (includes both bottom and midwater) from February 21, 2016 to May 31, 2016 and from October 1, 2016 to March 31, 2017 in those portions of Areas 109 to 111 and Subareas 130-2, 108-2 and 130-1 found within a line that begins at the intersection of the outer perimeter of Fishing Zone 5 and 51 deg 39.33 min N. lat. then following the northern boundary of Subarea 130-2 to 51 deg 39.33 min N. lat. 131 deg 00 min W. long. then to 51 deg 36.00 min N. lat. 130 deg 42.02 min W. long. then to 51 deg 48 min N. lat. 130 deg 00 min W. long. then to 51 deg 47 min N. lat. 129 deg 37 min W. long. then to 51 deg 28 min N. lat. 129 deg 48 min W. long. then to 51 deg 13 min N. lat. 129 deg 28 min W. long. then true south to 51 deg 04 min N. lat. 129 deg 28 min W. long. then to 50 deg 52 min N. lat. 129 deg 36 min W. then southern boundary of 130-1 to the outer perimeter of Fishing Zone 5 and back to the point of commencement. The intent of this closure is to reduce harvesting pressure on Pacific Ocean Perch stocks during the spawning period.



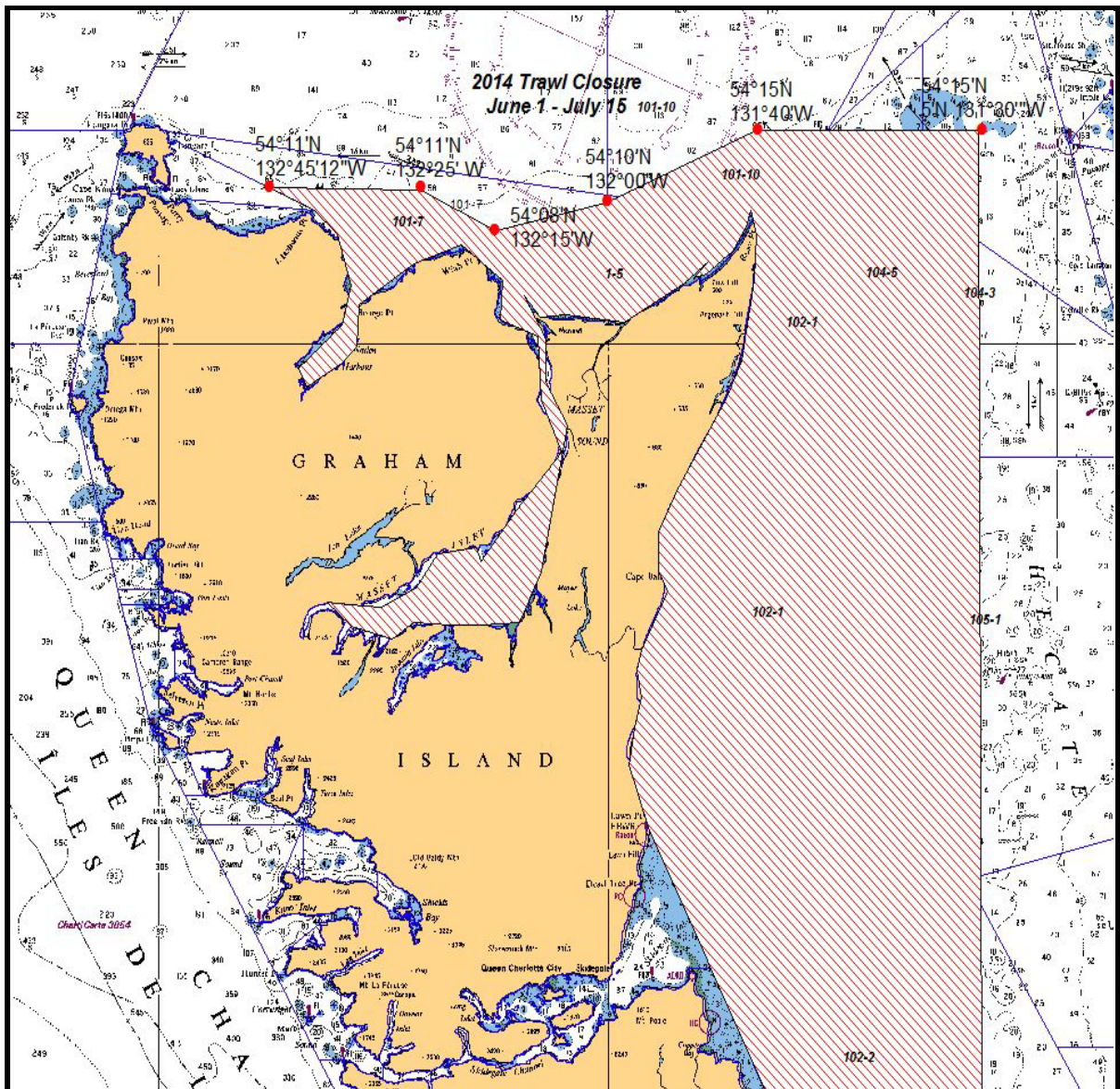
7.7. Hecate Strait/Dixon Entrance - Protection of Pacific Cod

Closed to all trawling (includes both bottom and midwater) from January 1, 2016 to April 30, 2016 and from January 1, 2017 through April 30, 2017 in those portions of area 101, south of 54° 12' N latitude and in those waters of areas 102, 104, 105 and subarea 5-20 found south and westerly of a line commencing at 54° 10' N latitude 131° 38' 30" W longitude thence to 54° 10' N latitude 131° 5' W longitude south thence to 53° 30' N latitude 131° 5' W longitude thence to 53° 30' N latitude 130° 28' 20" W longitude thence following the eastern boundary of 5-20, 5-22 and 106-1 to 52° 51' N latitude 129° 30' 37" W longitude thence westerly to 52° 51' N latitude 131° 41' W longitude thence northerly along the western boundary of subareas 102-2, 102-1 to the point of commencement (revised Jan 27, 2012). This closure is to protect the spawning biomass of Pacific Cod found in Hecate Strait and Dixon Entrance.



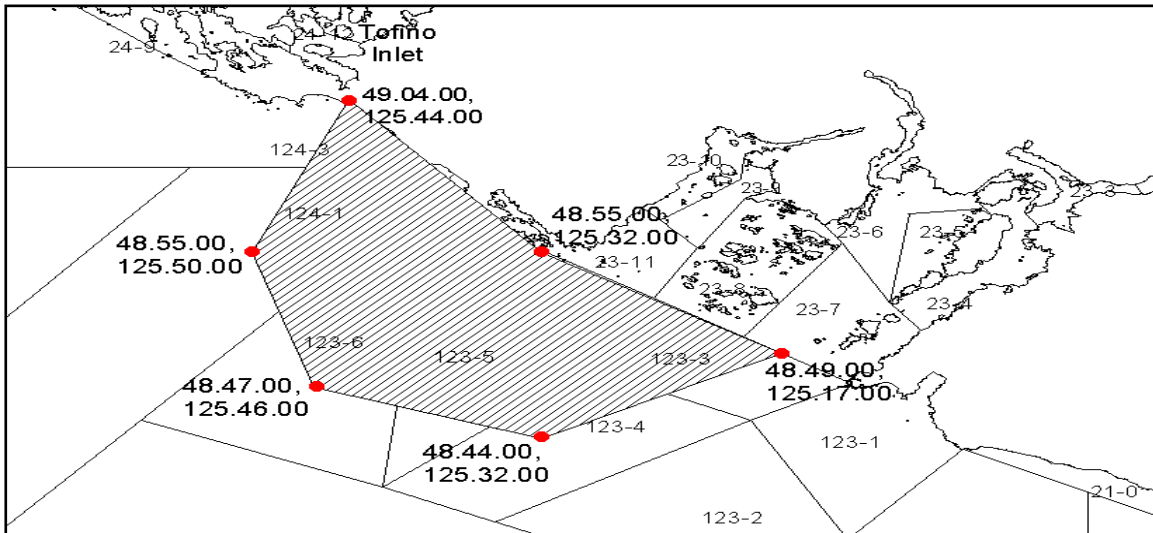
7.8. Lower West Hecate Strait/Dixon Entrance - Protection of Soft Shell Crabs

Closed to bottom trawling from June 1, 2016 through July 15, 2016 in Subareas 2-1, 2-2, 2-3, 102-1 and 104-5; that portion of Subarea 101-7, 101-10 and 104-2 south of line commencing at 54°11'N 132°45'12"W thence to 54°11'N 132°25'W thence to 54°08'N 132°15'W thence to 54°10'N 132°00'W thence to 54°15'N 131°40'W thence to 54°15'N 131°10'W; that portion of Subarea 104-2, that is both south of 54°15'N, and west of 131°10'W; that portion of Subarea 104-3, that is west of 131°10'W; that portion of Subarea 105-1, that is west of 131°10'W; that portion of Subarea 105-2, west of 131°10'W and that portion of Subarea 102-2, that is both north of 53°00'N, and west of 131°10'W. The intent of this closure is to protect crabs during the soft-shell period.



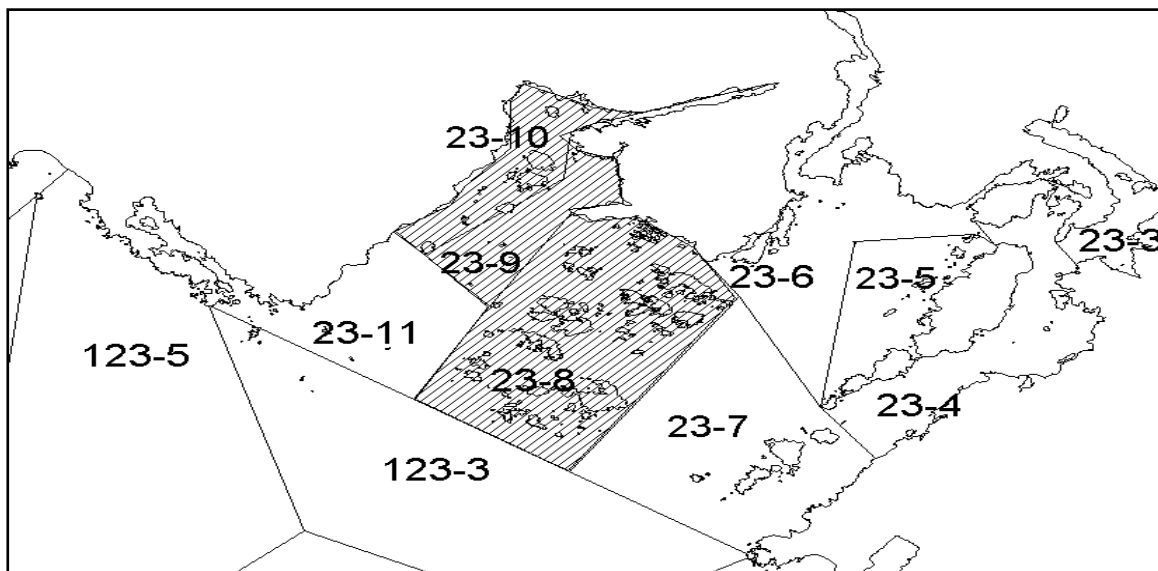
7.9. Lower West Coast Vancouver Island - Protection of Pacific Cod

Closed to all trawling (includes both bottom and midwater) from January 1, 2016 through to March 31, 2016 and from January 1, 2017 to March 31, 2017 in those portions of Subareas 123-3, 123-4, 123-5, 123-6, 124-1 and 124-3 that are found within the area bounded by a line that begins on the Vancouver Island shore near Amphitrite Point lighthouse at 48°55'N latitude 125°32'W longitude; then westerly to 49°04'N latitude 125°44'W longitude; then southerly to 48°55'N latitude 125°50'W longitude; then southerly to 48°47'N latitude 125°46'W longitude; then easterly to 48°44'N latitude 125°32'W longitude; then easterly to 48°49'N latitude 125°17'W longitude; then northerly along the surf line to the point of commencement. The intent of this closure is to reduce the harvesting of Pacific Cod during the spawning period.



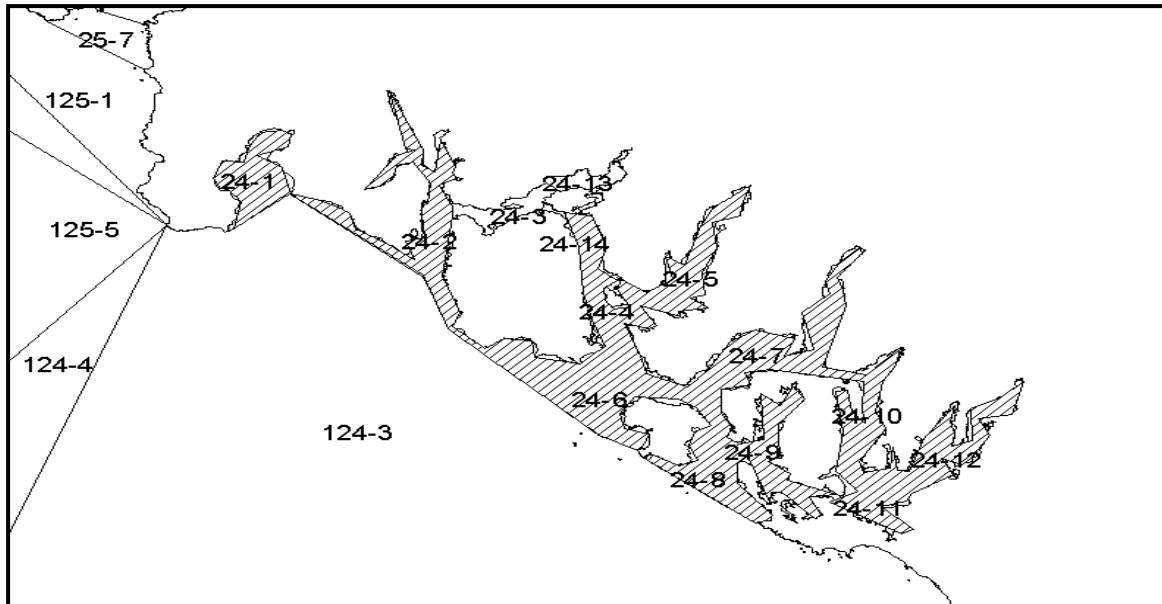
7.10. Area 23 (Barkley Sound)

Closed to all trawling (includes both bottom and midwater) from February 25, 2016 through March 25, 2016 in Subareas 23-8 to 23-10. The intent of this closure is to reduce gear conflicts during the roe herring season.



7.11. Area 24 (Clayoquot Sound)

Closed year-round to all trawling (includes both bottom and midwater) in Subareas 24-1, 24-2, 24-4 to 24-12 and 24-14. The intent of this closure is to address shellfish interception and shallow water habitat concerns.



8. IN-SEASON GROUND FISH TRAWL CLOSURES - INSIDE WATERS

There are a number of Subareas within the Johnstone, Georgia and Juan de Fuca Straits that are closed to both bottom and mid-water trawling. The closures have been implemented for reasons that include: herring spawn areas, salmon/herring holding areas, conflicts with crab gear, harbour congestion and reduction of harvesting pressure on localized groundfish stocks. A full description of Areas and Subareas referenced on these figures can be found in *the Pacific Fishery Management Area Regulations*.

The closures described on the following pages may change in-season. Current Fisheries Public Notices should be referred to prior to fishing.

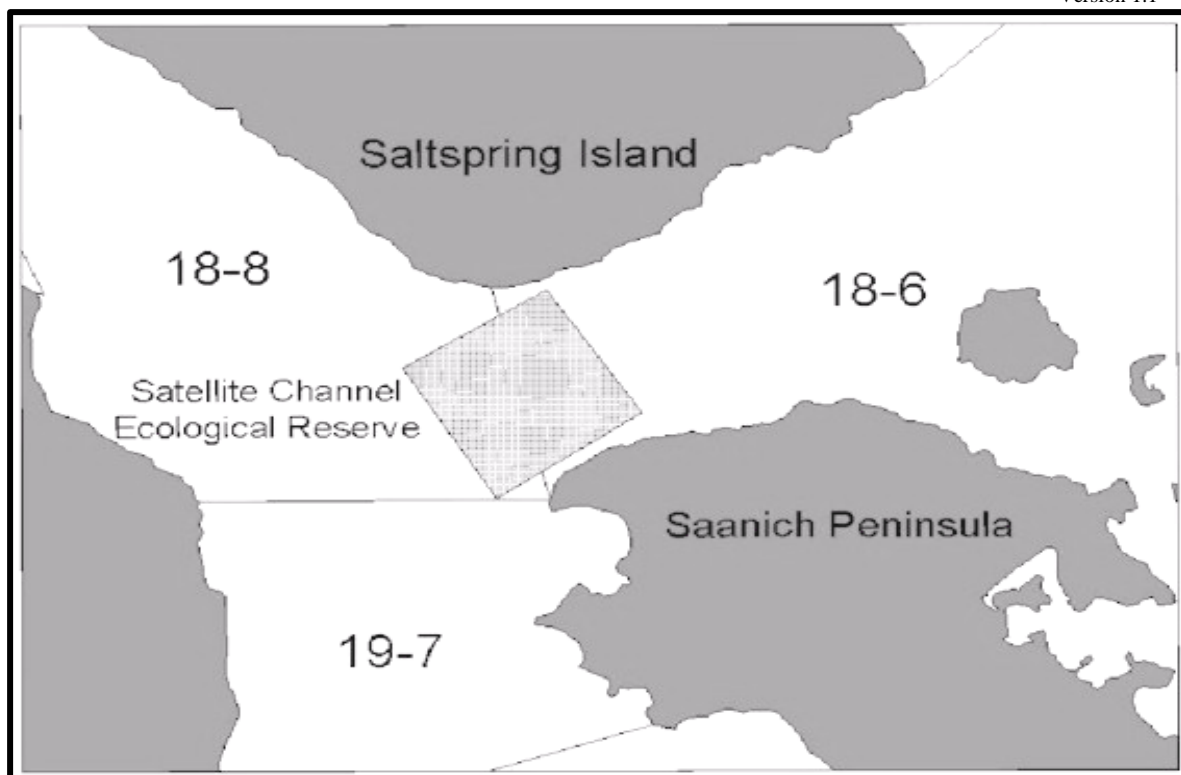
8.1. Rockfish Conservation Areas

Currently there are 164 Rockfish Conservation Areas (RCAs) in effect and are outlined in the Protecting British Columbia's Rockfish booklet. These booklets are available at any PFLU or can be downloaded from the Department's internet site at:

<http://www.pac.dfo-mpo.gc.ca/fm-gp/rec/species-especies/conservation-eng.htm>

8.2. Satellite Channel

Closed year round to all trawling (includes both bottom and midwater) in that portion of Subarea 18-6 inside a line: that begins at 48 deg 41.46 min N. lat. 123 deg 29.48 min W. long. then to 48 deg 41.96 min N. lat. 123 deg 28.18 min W. long. then to 48 deg 42.82 min N. lat. 123 deg 28.92 min W. long. then to 48 deg 42.32 min N. lat. 123 deg 30.23 min W. long. then to the beginning point. (B.C. Provincial Ecological Reserve Number 67.)



8.3. Gulf - Bottom Trawl Closures by Subarea

Subarea(s)	Closure Description	Period Closed
12-6	Those portions of Subarea 12-6 inside a line commencing at Red Point on the north-western shore of Harbledown Island, thence north-westerly to 50°38'N and 126°45'W, thence true east to 50°38' N and 126°35'W, thence true south to Dead Point on the northern shore of Harbledown Island, thence westerly along the north shore of Harbledown Island to the point of commencement at Red Point on Harbledown Island.	All year
12-20	Entire Subarea	All year
12-29, 12-34	Entire Subareas	February 16 to April 30
12-39	Those portions of Subarea 12-39 inside a line commencing at Slope Point on the southern shore of Gilford Island, thence north-westerly in a straight line to the navigational light on Duff Islet in lower Fife Sound, thence north-easterly in a straight line to Powell Point on Gilford Island, thence southerly along the western shore of Gilford Island to the point of commencement at Slope Point.	All year
12-42	Entire Subarea	All year

Subarea(s)	Closure Description	Period Closed
12-46	Entire Subarea	February 16 to April 30
13-1 to 13-17	Entire Subareas	All year
13-33,13-34	Entire Subareas	All year
14-1,14-8	Entire Subareas	All year
14-11,14-14,14-15	Entire Subareas	All year
14-2 to 14-7	Entire Subareas	April 1 to September30
14-9,14-10,14-12	Entire Subareas	April 1 to September30
16-3,16-4	Entire Subareas	All year
17-1,17-3,17-7	Entire Subareas	All year
17-9,17-14,17-17	Entire Subareas	All year
17-20,17-21	Entire Subareas	All year
18-2	Entire Subareas	All year
18-7, 18-8, 18-9	Entire Subareas	All year
19-1,19-2	Entire Subareas	All year
19-6 to 19-12	Entire Subareas	All year
20-6,20-7	Entire Subareas	All year
28-1 to 28-14	Entire Subareas	All year
29-3,29-4,29-6	Shoreward of 100 m contour line as shown on CHS charts # 3463 and # 3512.	All year
29-7 to 29-17	Entire Subareas	All year

8.4. Gulf - Mid-water Trawl Closures by Subarea

Subarea(s)	Closure Description	Period Closed
12-20	Entire Subarea	All year
12-29,12-34,12-46	Entire Subareas	February 16 to April 30
13-1 to 13-17	Entire Subareas	All year
13-33,13-34	Entire Subareas	All year
14-1,14-8	Entire Subareas	All year
14-11,14-14,14-15	Entire Subareas	All year
16-3,16-4	Entire Subareas	All year
17-1,17-7,17-9	Entire Subareas	All year
17-14,17-20,17-21	Entire Subareas	All year
18-7, 18-8	Entire Subareas	All year
18-10	Entire Subareas	All year
19-1,19-2	Entire Subareas	All year
19-6 to 19-12	Entire Subareas	All year
20-6,20-7	Entire Subareas	All year
28-1 to 28-14	Entire Subareas	All year
29-7 to 29-17	Entire Subareas	All year

8.5. Strait of Georgia/Howe Sound Sponge Reef Closed Areas

In the spring of 2015 DFO implemented a number of closures to all bottom contact gear in the area of the identified glass sponges reefs found with the Strait of Georgia. These closures were the result of extensive consultation, initiated in 2012, with First Nations, commercial and recreational interests, and other stakeholders.

Coordinates of each closure and an illustration of the locations of the nine Strait of Georgia Glass reef complexes are below:

1. Howe Sound – “Defence Islands Closure”

Includes that portion of Subarea 28-4 that lies inside the area bounded by a line that:

begins at	49 34.102N	123 17.070W
then southerly to	49 33.730N	123 16.562W
then to	49 33.553N	123 16.462W
then to	49 33.438N	123 16.750W
then to	49 33.707N	123 17.201W
then to	49 33.993N	123 17.391W
thence back to the beginning point.		

2. Howe Sound – “Queen Charlotte Channels Closures” (4 closed areas)

Closure # 1: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 21.486N	123 17.254W
then southerly to	49 20.528N	123 17.690W
then to	49 20.401N	123 17.956W
then to	49 20.765N	123 18.794W
then to	49 20.982N	123 18.584W
then to	49 21.098N	123 18.037W
then to	49 21.501N	123 17.737W
thence back to the beginning point.		

Closure# 2: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 20.288N	123 17.693W
then southeasterly to	49 20.224N	123 17.501W
then to	49 19.993N	123 17.377W
then to	49 19.802N	123 17.444W
then to	49 19.720N	123 17.841W
then to	49 19.937N	123 18.107W
then to	49 20.288N	123 17.693W
thence back to the beginning point.		

Closure# 3: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 19.296N	123 19.905W
then southerly to	49 19.918N	123 19.847W
then to	49 19.307N	123 20.344W
then to	49 19.643N	123 20.421W
then to	49 19.819N	123 20.361W
then to	49 19.947N	123 20.097W
thence back to the beginning point.		

Closure# 4: Includes those portions of Subareas 28-2 and 28-3 that lies inside the area bounded by a line that:

begins at	49 20.637N	123 19.162W
then easterly to	49 20.577N	123 18.720W
then to	49 20.441N	123 18.637W
then to	49 20.068N	123 18.818W
then to	49 20.076N	123 19.135W
then to	49 19.718N	123 19.188W
then to	49 19.726N	123 19.514W
then to	49 20.259N	123 19.828W
thence back to the beginning point.		

3. Strait of Georgia “Foreslope Hills Closure”

Includes that portion of Subarea 29-3 that lies inside the area bounded by a line that:

begins at	49 09.634N	123 23.048W
then southerly to	49 09.389N	123 22.622W
then to	49 09.187N	123 22.587W
then to	49 09.211N	123 23.567W
then to	49 09.646N	123 23.543W
thence back to the beginning point.		

4. Strait of Georgia – “Outer Gulf Islands Closure” (4 closed areas)

Closure# 1: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 54.936N	123 19.589W
then southerly to	48 54.283N	123 18.529W
then to	48 54.114N	123 18.619W
then to	48 54.065N	123 18.771W
then to	48 54.787N	123 19.929W
then to	48 54.902N	123 19.793W
thence back to the beginning point.		

Closure# 2: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 52.588N	123 15.261W
then easterly to	48 52.520N	123 14.537W

then to	48 51.971N	123 13.768W
then to	48 51.795N	123 13.947W
then to	48 52.150N	123 14.444W
then to	48 52.038N	123 14.678W
then to	48 52.479N	123 15.521W
thence back to the beginning point.		

Closure# 3: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 51.602N	123 13.233W
then southerly to	48 51.309N	123 12.751W
then to	48 50.913N	123 12.938W
then to	48 50.8441N	123 13.059W
then to	48 51.1634N	123 13.662W
then to	48 51.579N	123 13.378W
thence back to the beginning point.		

Closure# 4: Includes those portions of Subareas 18-1 and 29-4 that lies inside the area bounded by a line that:

begins at	48 50.999N	123 12.391W
then southerly to	48 50.607N	123 11.603W
then to	48 50.097N	123 10.956W
then to	48 49.959N	123 11.182W
then to	48 50.857N	123 12.654W
then to	48 50.959N	123 12.566W
thence back to the beginning point.		

5. Strait of Georgia – “Gabriola Island Closure”

Includes that portion of Subarea 17-11 that lies inside the area bounded by a line that:

begins at	49 13.672N	123 47.577W
then southerly to	49 13.235N	123 47.429W
then to	49 13.185N	123 47.882W
then to	49 13.391N	123 48.119W
then to	49 13.623N	123 48.166W
thence back to the beginning point.		

6. Strait of Georgia – “Parksville Closure”

Includes those portions of Subareas 14-2 and 14-3 that lies inside the area bounded by a line that:

begins at	49 21.680N	124 19.762W
then southeasterly to	49 21.514N	124 18.893W
then to	49 21.191N	124 17.723W
then to	49 21.064N	124 17.724W
then to	49 20.725N	124 18.380W
then to	49 21.432N	124 19.811W
thence back to the beginning point.		

7. Strait of Georgia – “East of Hornby Islands Closure”

Includes that portion of Subarea 14-6 that lies inside the area bounded by a line that:

begins at	49 33.490N	124 29.229W
then southerly to	49 32.701N	124 28.760W
then to	49 31.657N	124 29.434W
then to	49 31.663N	124 29.896W
then to	49 32.651N	124 29.752W
then to	49 33.340N	124 29.935W
then to	49 33.498N	124 29.773W
thence back to the beginning point.		

8. Strait of Georgia – “Sechelt Closure”

Includes that portion of Subarea 29-2 that lies inside the area bounded by a line that:

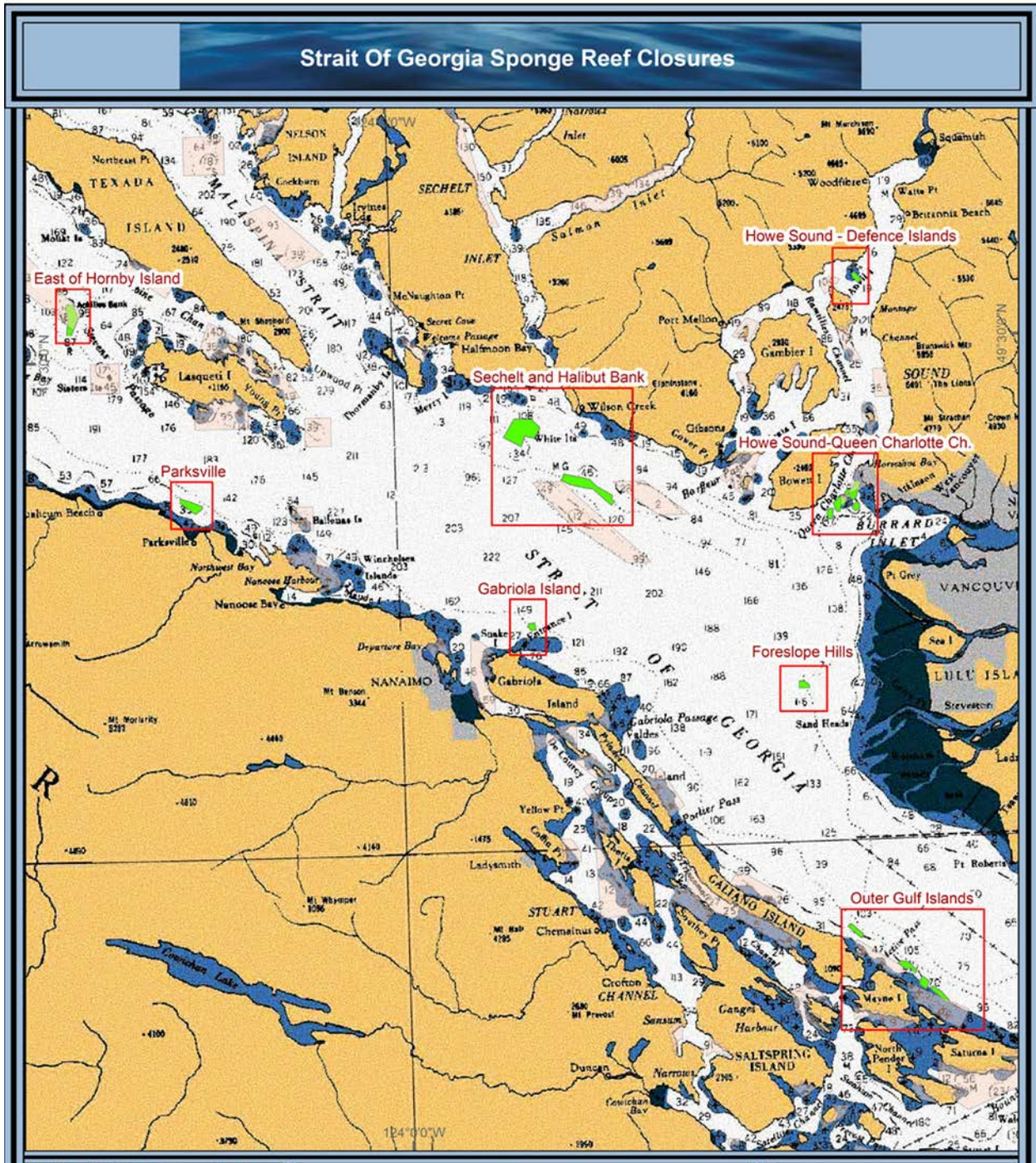
begins at	49 25.948N	123 48.889W
then easterly to	49 25.899N	123 47.266W
then to	49 25.373N	123 46.494W
then to	49 24.734N	123 47.083W
then to	49 24.910N	123 47.951W
then to	49 24.253N	123 48.283W
then to	49 24.845N	123 49.914W
thence back to the beginning point.		

9. Strait of Georgia – “Halibut Bank Closure”

Includes that portion of Subarea 29-2 that lies inside the area bounded by a line that:

begins at	49 21.768N	123 41.501W
then southerly to	49 21.174N	123 40.045W
then to	49 20.961N	123 40.139W
then to	49 20.803N	123 39.860W
then to	49 20.565N	123 40.182W
then to	49 21.610N	123 41.843W
then to	49 22.555N	123 44.456W
then to	49 22.188N	123 42.167W
then to	49 21.945N	123 42.087W
then to	49 21.673N	123 42.643W
then to	49 21.895N	123 43.908W
then to	49 22.174N	123 44.748W
thence back to the beginning point.		

Strait of Georgia Glass Sponge Reef Locations:



9. GEAR

Subject to the licence option selected, species closures, area closures and IVQ holdings, a vessel holding a valid groundfish trawl licence may fish with either bottom and/or mid-water trawl gear.

9.1. Mesh Size

“Mesh size” means the total length of twine measured along two contiguous sides of a single mesh, including the distance across the knot joining those sides but not including any other knots. Where a minimum mesh size is prescribed, no person shall use any device by

means of which openings that are smaller in size than the original mesh are created. Mesh size shall be measured when the net is wet.

9.2. Mesh Measuring Procedure

The average measurement, in millimetres, of any 20 consecutive meshes running parallel to the long axis of the codend, beginning at the after end of the codend, and at least 10 meshes from the lacings; made by inserting into the meshes a flat wedge shaped gauge having a taper of 2 cm in 8 cm and a thickness of 2.3 mm with a weight of 5 kg attached. The gauge shall be inserted into the mesh opening using a weight until the mesh gauge is stopped by the resistance of the mesh at the tapering edges. In any other part of the trawl 20 consecutive meshes at least 10 meshes from the lacings.

The meshes to be measured need not be consecutive if this is prevented by the application ropes and codlines. Any mesh that has been mended or torn or to which attachments to the net are fixed shall not be measured.

9.3. Gear Restrictions

9.3.1. Trawl Net Size

Subject to Sections 9.3.1.1 and 9.3.1.2 and 9.3.1.3, the coast-wide mesh size in any part of a bottom trawl or mid-water trawl net, including the cod-end, shall not be less than 76 mm (approximately three inches).

9.3.1.1. In Areas 13 to 19 and 29: the mesh size in a bottom trawl net shall not be less than 108 mm (approximately 4.25 inches) in the final 50 meshes, including the cod-end. In all other parts of a bottom trawl net, the mesh size shall not be less than 76 mm (approximately three inches).

9.3.1.2. In Hecate Strait and Eastern Dixon Entrance: the mesh size in a bottom trawl net shall not be less than 152.6 mm (approximately 6 inches) in the last 50 meshes of the net, including the cod-end. In all other parts of a bottom trawl net, the mesh size shall not be less than 76 mm (approximately three inches). This restriction applies to that area bounded on the south by 52°51'N in Hecate Strait, bounded on the north by the Canada/United States International boundary, bounded on the west by 132°00'W in Dixon Entrance, and bounded on the east by the mainland of British Columbia.

The intent of the new mesh size for all trawl vessels operating within the Hecate Strait/Dixon Entrance areas is to reduce the catch, handling and subsequent mortality of smaller fish in the area. This action has been discussed and endorsed by the groundfish trawl industry and becomes a mandatory condition of the groundfish trawl licence for the 2016/2017 season.

9.3.1.3. In Queen Charlotte Sound: the mesh size in a bottom trawl shall not be less than 140 mm (approximately 5.5 inches) mesh size restriction in the last 50 meshes of the net, including the cod-end. For all other parts of a bottom trawl net, the mesh size shall not be less than 76 mm (approximately three inches). This mesh size restriction applies to vessels fishing in waters shallower than 60 fathoms in the area bounded by the southern boundary of 130-1 and the 52°51'N (Hecate Strait) in the north. The intent of this action is to reduce bycatch of small fish.

9.3.2. Trawl Net Escape Panel

9.3.2.1. All bottom trawl nets and mid-water trawl nets, when used in fishing for pacific hake destined for delivery to a foreign fishing vessel licensed under the *Coastal Fisheries Protection Regulations*, shall have an escape panel fitted to permit the release of unwanted fish. This panel shall be located in the intermediate portion (lengthening piece) of the trawl net commencing at a point six feet from where the intermediate (lengthening piece) is attached to the cod-end. The panel shall be composed of not less than one row of meshes running parallel to the long axis of the intermediate for a distance of not less than six feet. The row(s) of mesh shall be cut and sewn with a length of twine or similar material having a breaking strength not exceeding 70 pounds.

9.4. Cod-end Protection Device

For the purpose of preventing wear and tear to a trawl net, there may be attached to the underside of the cod-end any hides, canvas, netting or similar material. For the purpose of preventing wear and tear to a trawl net, there may be attached to the topside of the cod-end, one of the following topside chafers.

9.4.1. Regular Topside Chafer

A rectangular piece of netting that: is at least one and half times the width of the area of the cod-end that is covered, where the width is measured at right angles to the long axis of the cod-end; has a mesh size that is not less than the mesh size of the cod-end and; is fastened to the cod-end only along the forward and lateral edges of the netting in a manner that will permit it to extend where a splitting strap is used, over not more of the cod-end than that part between the fourth mesh forward of the cod line mesh and the fourth mesh forward of the splitting strap, and where a splitting strap is not used, over not more than one third of the cod-end, measured from not less than the fourth mesh forward of the cod line mesh.

9.4.2. Modified Polish Topside Chafer

A rectangular piece of netting that: is made of twine of the same material and size as that of the cod-end, or of any single, thick, knotless twine material; has a mesh size that is twice as large as the mesh size of the cod-end; is attached to the rear portion of the topside of the cod-end; and is fastened to the cod-end along the forward, lateral and rear edges of the netting in a manner that will cause each mesh to exactly overlie four meshes of the cod-end over which it extends.

9.4.3. Multiple Flap-Type Topside Chafer

A series of pieces of netting where the aggregate length extends less than two-thirds of the length of the cod-end; and each piece of netting is attached to the topside of the cod-end so that it overlaps the piece of netting immediately to its rear, if any, has a mesh size that is not less than the mesh size of the cod-end, is at least as wide as the cod-end, where the width is measured at right angles to the cod-end, is not more than 10 meshes long, and is fastened by its forward edge only across the cod-end at right angles to its long axis.

The above description of mesh size and gear restrictions are provided for reference purposes only. Groundfish trawl vessel owners, captains and crews must carefully read their 2016/2017 groundfish trawl licence and the attached conditions of licence and, regulations (*Fishery [General] Regulations* and *Pacific Fishery Regulations, 1993*) to ensure a full understanding of all gear restrictions in effect.

10. LICENSING

10.1. Licence Category

A commercial groundfish trawl Category T or a communal commercial groundfish trawl category FT licence eligibility is required to commercially harvest groundfish trawl species using trawl gear. Category T licence eligibilities are limited entry and vessel based. Category FT licence eligibilities are limited entry and party based; an Aboriginal group is the licence eligibility holder and the eligibility must be designated to a commercially registered fishing vessel that meets established length restrictions.

Vessels authorised to fish under the authority of a groundfish trawl licence are also permitted to fish and retain catch using hook and line gear for those species described in Schedule II Part 2 of the Pacific Fishery Regulations 1993, for species and the quantities set out in Part 2 of the groundfish trawl licence conditions, to transport fish caught by other vessels and to be designated to fish under the authority of a category Z licence.

Groundfish trawl vessel owners and fishers are reminded to carefully review and familiarize themselves with the groundfish trawl licence and attached conditions.

10.2. Licence Renewal Fees

The commercial groundfish trawl licence renewal fee is based on the combination of a base licence fee of \$500.00 and the Permanent IVQ holdings of the licence on February 20th, measured in pounds

IVQ Species	Fee Per Tonne of IVQ	Fee Per Pound of IVQ
All Rockfish Species	\$15.00	\$.0068
All Sole Species	\$16.00	\$.0073
Lingcod	\$16.00	\$.0073
Pollock	\$7.50	\$.0034
Hake	\$4.00	\$.0018

There is no annual licence renewal fee for communal commercial category FT license.

10.3. Licence Application and Issuance

Renewal of a Category T licence and payment of the fees must be done on an annual basis to retain the privilege to be issued the licence in the future, regardless of whether or not fishing is carried out. Any category T licenses not renewed by February 20, 2017 will cease and licence issuance requests will be unable to be considered in future.

Prior to annual licence issuance of a communal commercial licence, licence eligibility holders are required to annually designate the fishing vessel to hold the licence. This must be done by navigating to the 'Submit a Request' menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>).

Prior to annual licence issuance, vessel owners/licence eligibility holders are required to:

- a) Meet any Ministerial conditions placed on the licence eligibility.
- b) Ensure all conditions of the previous year's licence have been met.

To avoid delays in licence issuance, please ensure the payment, option selection and designated vessel information is submitted through the National Online Licensing System at the same time.

10.3.1. Groundfish Trawl Licence Option Selection

Prior to Licence issue, each groundfish trawl vessel owner/licence eligibility holder may choose to fish under the conditions of one of two options (A or B) for the current fishing year. By default DFO sets the trawl licence option to that issued as of the end of the previous season.

Option selection for each groundfish trawl licence may be done by navigating to the 'Submit a Request' menu selection within the National Online Licensing System (NOLS). Full instructions are available at: <http://www.dfo-mpo.gc.ca/fm-gp/sdc-cps/products-produits/request-demande-eng.htm>).

A general description of the permitted activities under each option are:

10.3.1.1. Option A

- i) Permitted to fish with bottom trawl gear in all areas, except management Area 4B (Fisheries Management Areas 12 to 20 and 29) open to bottom trawling.
- ii) Permitted to fish by mid-water trawl coast-wide.
- iii) Subject to one hundred (100) percent dockside monitoring for all landings.
- iv) Subject to one hundred (100) percent at sea observer coverage when fishing with bottom or mid-water gear except when mid-water trawling for hake and delivering all fish caught as fresh round product to land.
- v) Subject to one hundred (100) percent at sea monitoring coverage when fishing when mid-water trawling for hake.
- vi) Permitted to fish throughout the year for groundfish species subject to TAC up to the amount of the IVQ specified on the licence.
- vii) Permitted to reallocate IVQ holdings subject to the rules governing such reallocations.
- viii) Limited to 15,000 pound per trip for all combined rockfish species not subject to TAC.
- ix) Permitted to retain incidentally caught mackerel equal to six (6) percent of the offshore pacific hake IVQ portion of quota holdings.
- x) No trip limit for groundfish species (excluding rockfish) not subject to a TAC.
- xi) Not permitted to fish for and retain Eulachon, wolf-eels, any salmon species, Pacific Herring, Green Sturgeon, White Sturgeon, Pacific Basking Shark, Tope (Soupfin) Shark or Bluntnose Sixgill Shark.
- xii) Halibut is not permitted to be retained. By-catch mortality caps for halibut will be issued on an individual vessel basis. Licence holders will be responsible and accountable for all halibut mortality incurred.
- xiii) Corals and Sponges are not permitted to be retained unless specifically authorized by Fisheries and Oceans Canada.
- xiv) A fleet wide habitat bycatch conservation limit (HBCL) for Corals and Sponges has been set and allocated as IVQ to individual groundfish trawl vessels. The HBCL IVQ is transferable among groundfish trawl licence holders within annual caps. Groundfish trawl licence holders will be responsible and accountable for all halibut mortality incurred.

10.3.1.2. Option B

- i) Required to request monthly amendments to groundfish trawl licence prior to fishing.
- ii) Permitted to fish by bottom trawl in Area 4B (Areas 12 to 20 and 29) only.
- iii) Not permitted to fish by mid-water trawl in any Area.
- iv) Limited to a maximum of 15 landings per calendar month.
- v) Subject to one hundred (100) percent dockside monitoring for all landings.
- vi) Subject to mandatory at-sea monitoring of all fishing activities.
- vii) A 15,000 pound calendar month limit for all groundfish species combined other than dogfish, lingcod and rockfish; of which no more than 200 pounds shall be Sablefish, and of which no more than 200 pounds shall be Petrale sole, and of which no more than 500 pounds shall be Pacific Cod.
- viii) Not permitted to fish for and retain Eulachon, halibut, lingcod, any rockfish, squid, octopus, wolf-eels any salmon species, Pacific Herring, Green Sturgeon, White Sturgeon, Pacific Basking Shark, Tope (Soupfin) Shark or Bluntnose Sixgill Shark,
- ix) No limit on the quantity of dogfish.

10.3.2. In Season Change of Groundfish Trawl Licence Option

Groundfish trawl vessel owners/licence eligibility holders may choose to fish choosing Option B are permitted to make a once a year change from Option B to Option A. Once issued, groundfish trawl vessel owners/licence eligibility holders issued an Option A licence may not change their selection for the remainder of the fishing year.

10.3.3. Requirement and Issuance of Valid Licence Amendments

Prior to commencing to harvest under the authority of a groundfish trawl licence, a Request for a 2016/2017 Groundfish Trawl Licence Amendment form must be completed and submitted to the Groundfish Management Unit. Groundfish trawl vessel owners/licence eligibility holders or the party authorised to request amendments must complete the amendment request form.

Option B vessels will be issued monthly amendments. The owner of an Option B vessel must submit a 2016/2017 Groundfish Trawl Licence Amendment request form for each month and be in possession of a valid amendment prior to fishing.

Option A vessels must be in possession of a valid amendment to the vessels 2016/2017 groundfish trawl licence prior to fishing.

Contact either of the Groundfish Management Unit Quota officers at (604) 666-0010 or (604) 666-855 for further information.

10.4. Licence Documents

Groundfish Trawl licence documents are valid from the date of issue to February 20, 2017.

Replacements for lost or destroyed licence documents may be obtained by reprinting the licence documents through the National Online Licensing System.

10.5. Vessel Replacement Rules for Groundfish Trawl

The owner(s) of a category T licensed Groundfish Trawl vessel may make an application to replace the commercial fishing vessel. Both the replacement vessel and the vessel being

replaced must have a survey on file with the Pacific Fishery Licence Unit (PFLU) or submitted with the vessel replacement application. Vessels must be surveyed according to the Department guidelines.

A groundfish trawl licence eligibility may be placed either permanently or temporarily on any Canadian commercially registered fishing vessel which does not exceed the maximum vessel length (MVL) i.e. the overall length of the vessel that held the licence eligibility as of December 1, 1998 plus 50%. This is subject to departmental policies governing the placement of other vessel based licence eligibilities also held on the vessel being replaced.

An application for a temporary replacement may be made where a vessel has been declared a loss, or the vessel is out of service due to an accident or unforeseen damage. Written confirmation from an insurance company, shipyard or marine engineer explaining why the vessel is inoperative is required. Vessels that are in disrepair at the time of purchase, vessels with engine problems, delays in annual maintenance or rebuilds do not qualify for a temporary transfer.

Where single groundfish trawl licence eligibility is being placed on a shorter vessel, there remains a future opportunity to place the licence eligibility on a commercially registered vessel which does not exceed the MVL i.e. the overall length of the vessel that held the licence eligibility as of December 1, 1998 plus 50%.

A groundfish trawl licence eligibility may be separated from other licence eligibilities and placed on a Canadian commercially registered fishing vessel that does not exceed the MVL. Where the receiving vessel does not already hold a vessel based licence eligibility, the Schedule II privileges associated with the groundfish trawl eligibility must be relinquished.

Groundfish trawl licensed vessel owners are allowed to swap groundfish trawl eligibilities within the groundfish trawl fleet subject to the length guidelines described within this section. Where swapping occurs, the IVQ and holdings caps follow each licence eligibility.

Once a vessel has commenced fishing under the authority of a groundfish trawl licence, that vessel may not fish under the authority of another groundfish trawl licence in the same fishing year.

For further information on vessel replacement policies, please contact a PFLU by telephone at 1-877-535-7307 or email at fishing-peche@dfo-mpo.gc.ca or any of the Groundfish Management Unit (GMU) contacts listed in appendix 1 of the IFMP.

11. GROUND FISH SPECIES AND ALLOWABLE CATCHES

11.1. Prohibited Species

The following species of vertebrate fish are not allowed to be fished for or retained when fishing under the authority of a groundfish trawl licence.

<i>Common Name</i>	<i>Scientific Name</i>
Pacific Halibut	<i>Hippoglossus stenolepis</i>
Salmon Species	<i>Onchorhynchus spp.</i>
Pacific Herring	<i>Clupea harengus pallasii</i>
Green Sturgeon	<i>Acipenser medirostris</i>

White Sturgeon	<i>Acipenser transmontus</i>
Wolf-Eel	<i>Anarrhichthys ocellatus</i>
Pacific Basking Shark	<i>Cetorhinus maximus</i>
Tope (Soupfin) Shark	<i>Galeorhinus zyopterus</i>
Bluntnose Sixgill Shark	<i>Hexanchus griseus</i>
Eulachon	<i>Thaleichthys pacificus</i>

11.2. Species Permitted to be Fished

Common Name	Scientific Name
Aurora rockfish	<i>Sebastes aurora</i>
Black rockfish	<i>Sebastes melanops</i>
Blue rockfish	<i>Sebastes mystinus</i>
Bocaccio rockfish	<i>Sebastes paucispinis</i>
Brown rockfish	<i>Sebastes auriculatus</i>
Canary rockfish	<i>Sebastes pinniger</i>
Chilipepper rockfish	<i>Sebastes goodie</i>
China rockfish	<i>Sebastes nebulosus</i>
Copper rockfish	<i>Sebastes caurinus</i>
Darkblotched rockfish	<i>Sebastes crameri</i>
Dusky rockfish	<i>Sebastes ciliates</i>
Greenstriped rockfish	<i>Sebastes elongates</i>
Harlequin rockfish	<i>Sebastes variegates</i>
Longspine thornyhead	<i>Sebastolobus altivelis</i>
Northern rockfish	<i>Sebastes polyspinis</i>
Pacific Ocean Perch	<i>Sebastes alutus</i>
Puget Sound rockfish	<i>Sebastes emphaeus</i>
Pygmy rockfish	<i>Sebastes wilsoni</i>
Quillback rockfish	<i>Sebastes maliger</i>
Redbanded rockfish	<i>Sebastes babcocki</i>
Redstripe rockfish	<i>Sebastes proriger</i>
Rosethorn rockfish	<i>Sebastes helvomaculatus</i>
Rougheye rockfish	<i>Sebastes aleutianus</i>
Sharpchin rockfish	<i>Sebastes zacentrus</i>
Shortbelly rockfish	<i>Sebastes jordani</i>
Shortraker rockfish	<i>Sebastes borealis</i>
Shortspine thornyhead	<i>Sebastolobus alascanus</i>
Silvergray rockfish	<i>Sebastes brevispinis</i>
Splitnose rockfish	<i>Sebastes diploproa</i>
Stripetail rockfish	<i>Sebastes saxicola</i>
Tiger rockfish	<i>Sebastes nigrocinctus</i>
Vermilion rockfish	<i>Sebastes miniatus</i>
Widow rockfish	<i>Sebastes entomelas</i>
Yelloweye rockfish	<i>Sebastes ruberrimus</i>
Yellowmouth rockfish	<i>Sebastes reedi</i>
Yellowtail rockfish	<i>Sebastes flavidus</i>
Skate & Sharks	
Big skate	<i>Raja binoculata</i>
Longnose skate	<i>Raja rhina</i>
Black skate	<i>Raja kincaidi</i>

Starry skate	<i>Raja stellulata</i>
Deepsea skate	<i>Raja abyssicola</i>
Spiny Dogfish	<i>Squalus suckleyi</i>
Flatfish	
Arrowtooth flounder	<i>Atheresthes stomias</i>
Butter sole	<i>Isopsetta isolepis</i>
C-O sole	<i>Pleuronichthys coenosus</i>
Curlfin sole	<i>Pleuronichthys decurrens</i>
Dover sole	<i>Microstomus pacificus</i>
Lemon/English sole	<i>Parophrys vetulus</i>
Flathead sole	<i>Hippoglossoides elassodon</i>
Pacific sanddab	<i>Citarichthys sordidus</i>
Petrale sole	<i>Eopsetta jordani</i>
Rex sole	<i>Glyptocephalus zachirus</i>
Rock sole	<i>Lepidopsetta bilineata</i>
Sand sole	<i>Psettichthys melanostictus</i>
Slender sole	<i>Lyopsetta exilis</i>
Speckled sanddab	<i>Citharichthys stigmaeus</i>
Starry flounder	<i>Platichthys stellatus</i>
Yellowfin sole	<i>Limanda aspera</i>
Tuna	
Albacore	<i>Thunnus alalunga</i>
Bluefin	<i>Thunnus thynnus</i>
Pacific bonito	<i>Sarda chiliensis lineolata</i>
Skipjack	<i>Euthynnus pelamis</i>
Yellowfin	<i>Thunnus albacares</i>
Smelt	
Surf smelt	<i>Hypomesus pretiosus pretiosus</i>
Rainbow smelt	<i>Osmerus mordax dentex</i>
Night smelt	<i>Spirinchus starski</i>
Mackerel	
Chub Mackerel	<i>Scomber japonicas</i>
Pacific Mackerel	<i>Trachurus symmetricus</i>
Roundfish	
Greenlings	<i>Hexagrammos sp.</i>
Lingcod	<i>Ophiodon elongates</i>
Pacific cod	<i>Gadus macrocephalus</i>
Sablefish	<i>Anoplopoma fimbria</i>
Sculpins	Family Cottidea
Walleye Pollock	<i>Thragra chalcogramma</i>
Pacific hake	<i>Merluccius productus</i>
Any Other Vertebrate Fish Except those listed in 11.1 above	

11.3. Research Allocation

To support groundfish research and account for unavoidable mortality incurred in during the 2016 Groundfish Trawl Multi-species surveys planned for the West Coast of Vancouver Island (WCVI) (Groundfish Management Area 3C/D) and West Coast of Haida Gwaii (Groundfish Management Area 5E), the following quantities have been subtracted prior to defining the Groundfish Trawl TAC's set out in section 11.4 below;

Species	Management Area	WCVI Research Allocation (mt)	Management Area	Haida Gwaii Survey (mt)	Total Research Trawl Mortality (mt)
Yellowtail Rockfish	3C	6.1	3D, 5A/B, 5C/D/E	0.1	6.2
Widow Rockfish	Coast-wide total	0.8	Coast-wide total	0.7	1.5
Canary Rockfish	3C/D	3.1	5E	0.2	3.3
Silvergrey Rockfish	3C/D	3.2	5E	7.5	10.7
Pacific Ocean Perch	3C/D	15.3	5D/E	41.8	57.1
Yellowmouth Rockfish	3C, 3D	0.9	5E	4.1	5.0
Rougeye Rockfish	Coast-wide	0.7	Coast-wide	9.6	10.3
Shortraker Rockfish	Coast-wide	0.1	Coast-wide	0.7	0.8
Redstripe Rockfish	3C, 3D5A/B	7.4	5E	4.0	11.4
Copper, China, Tiger Rockfish	Coastwide	0.0	Coastwide	0.0	0.0
Quillback Rockfish	Coastwide	0.1	Coastwide	0.0	0.1
Yelloweye Rockfish	Coastwide	0.2	Coastwide	0.1	0.3
Shortspine Thornyheads	Coast-wide	0.8	Coast-wide	3.3	4.1
Longspine Thornyheads	Coast-wide	0.0	Coast-wide	0.4	0.4
Redbanded Rockfish	Coast-wide	0.8	Coast-wide	0.6	1.4
Bocaccio Rockfish	Coast-wide	0.1	Coast-wide	0.1	0.2
Pacific Cod	3C/D	2.1	5C/D/E	0.3	2.4
Dover Sole	3C/D	3.5	5C/D/E	1.0	4.5
English/Lemon Sole	3 C/D, 5 A/B	1.9	5C/D/E	0.0	1.9
Petrals Sole	Coast-wide	1.0	Coast-wide	0.1	1.1

Species	Management Area	WCVI Research Allocation (mt)	Management Area	Haida Gwaii Survey (mt)	Total Research Trawl Mortality (mt)
Rock Sole	3C/D	0.3	5E	0.0	0.3
Lingcod	3C, 3D	1.3	5C/D/E	0.3	1.6
Sablefish	Coast-wide	4.0	Coast-wide	2.6	6.6
Spiny Dogfish	Rest of Coast	17.8	Rest of Coast	0.1	17.9
Walleye Pollock	3C/D)	1.3	5 C/D/E	0.3	1.6
Pacific Hake	Offshore	1.1	Offshore	1.4	2.5
Arrowtooth Flounder	Coast-wide	19.0	Coast-wide	8.5	27.5
Big Skate	3C/D	0.1	5 C/D/E	0.0	0.1
Longnose Skate	3C/D	0.7	5 C/D/E	1.2	1.9
Pacific Halibut Mortality	Coast-wide	0.9	Coast-wide	0.7	1.6
Total - All Species	WCVI survey	94.5	HG Survey	89.4	183.9

11.4. Annual Trawl Total Allowable Catches

TACs listed below have been set for the commercial groundfish trawl fishery for the 2016/2017 fishing season. In some cases, the coast-wide total differs slightly from the amount obtained by summing the Species Management Areas values. This difference is due to the TAC being expressed in whole numbers within the table. For the exact TAC values, please contact the Groundfish Management Unit (see Appendix 1).

Species	Management Area	TAC ¹ (tonnes)
Yellowtail Rockfish	3C ⁵	1,218
	3D, 5A/B, 5C/D/E ⁵	4,216
	Coast-wide total	5,434
Widow Rockfish	Coast-wide total	2,314
Canary Rockfish	3C/D	500
	5A/B	197
	5C/D	79
	5E	10
	Coast-wide total	786
Silvergray Rockfish	3C/D	328
	5A/B	646
	5C/D	586
	5E	374
	Coast-wide total	1,935
Pacific Ocean Perch	3C/D	735
	5A/B ⁶	1,687
	5C ²	1,555
	5D/E ²	1,158
	Coast-wide total	5,135
Yellowmouth Rockfish	3C	219
	3D, 5A/B	1,134
	5C/D ²	685
	5E ²	321
	Coast-wide total	2,359
Rougheye Rockfish	Coast-wide	626
Shorthead Rockfish	Coast-wide	125
Redstripe Rockfish	3C	172
	3D, 5A/B	766
	5C/D	330
	5E	242
	Coast-wide total	1,510
Shortspine Thornyheads	Coast-wide	731
Longspine Thornyheads	Coast-wide	405
Redbanded Rockfish	Coast-wide	293
Bocaccio Rockfish ⁷	Coast-wide	80
Yelloweye Rockfish	Coast-wide ⁴	5
Quillback	Coast-wide ⁴	4
Copper, China And Tiger Rockfish	Coast-wide ⁴	1
Pacific Cod	3C/D	498
	5A/B	200

Species	Management Area	TAC ¹ (tonnes)
	5C/D/E	700
	Coast-wide total	1,398
Dover Sole	3C/D	1,372
	5A/B	598
	55C/D/E	1,099
	Coast-wide total	3,069
Rock Sole	3C/D	102
	5A/B	650
	5C/D	800
	Coast-wide total	1,552
Lemon Sole	3C/D, 5A/B	184
	5C/D/E	636
	Coast-wide total	820
Petrale Sole	Coast-wide	899
Lingcod	3C	799
	3D	439
	5A/B	862
	5C/D/E	580
	Coast-wide total	2,680
Spiny Dogfish	4B	640
	Rest of Coast	3,822
	Coast-wide total	4,462
Sablefish	Coast-wide	156
Pollock	Gulf ³	1,115
	5A/B (includes Area 11, 12)	1,790
	5C/D/E	1,320
	Coast-wide total	4,225
Hake	Gulf ³	7,000
	Offshore	29,998 ⁸
Big Skate	3C/D	12
	5A/B	341
	5C/D/E	561
Longnose Skate	3C/D	87
	5A/B	31
	5C/D/E	17
Arrowtooth Flounder	Coast-wide	17,473

¹ All quotas are in round weight and metric tonnes (mt). To convert mt. to lbs. multiple by 2,204.6

² Pacific ocean perch and yellow mouth rockfish caught within Subarea 102-3 and those portions of Subareas 142-1, 130-3 and 130-2 found southerly and easterly of a straight line commencing at 52°20'00"N 131°36'00"W thence to 52°20'00"N 132°00'00"W thence to 51°30'00"N 131°00'00"W and easterly and northerly of a straight line commencing at 51°30'00"N 131°00'00"W thence to 51°39'20"N 130°30'30"W will be deducted from the vessel's 5C IVQ for Pacific Ocean Perch and 5C/D IVQ for Yellowmouth Rockfish.

³ TAC for the Gulf applies to hake and Pollock catches occurring in Areas 13 to 19 and 29. All other hake catches are applied against a vessel's Offshore Hake quota holdings. All other Pollock catch are applied to the area of catch holdings.

⁴ Yelloweye, quillback, copper, china and tiger rockfish will not be allocated as IVQ. All proceeds for landing of these rockfish species will be relinquished and the vessel fishing restrictions for IVQ overage shall not apply.

⁵ Yellowtail rockfish caught in the offshore pacific hake fishery can be deducted from IVQ coast-wide. The vessel master is responsible for designating the area at the time of the offload.

⁶ Pacific ocean perch within Subarea 127-1 and that portion of Subareas 127-2 found northerly and westerly of 50°06'00"N will be deducted from the vessel's Pacific Ocean Perch rockfish 5A/B IVQ.

Species	Management Area	TAC ¹ (tonnes)
⁷ This is an annual Trawl mortality cap for Bocaccio Rockfish.		
⁸ This is a notion TAC for initial licence issuance – The actual TAC will be announced in early April 2016.		

11.5. Bocaccio Rockfish Measures

To address the conservation concern for Bocaccio rockfish identified through a Canadian Science Advisory Process review, new management measures were adopted for the groundfish trawl fishery for the 2013/2014 season. These include establishment of an annual trawl mortality TAC, establishing individual vessel licence allocations, establishing holdings caps, and applying all rules governing the Trawl IVQ program for Bocaccio rockfish. As a result of the annual review of groundfish industry’s progress in achieving the targetted mortality cap, DFO and the groundfish trawl industry agreed to reductions in the trawl TAC to 110 tonnes for the 2015/2016 season and followed by a further reduction to 80 tonnes for the 2016/2017 season.

Additionally, the trawl industry has reconfirmed its continuation of the 2004 voluntary program whereby groundfish trawl vessel masters donate all proceeds of all landed Bocaccio rockfish for use in groundfish research programs. These management actions have been taken to reduce the trawl fleet’s mortality of Bocaccio rockfish and allow for stock rebuilding over the long term. The Department reviews the efficacy of these measures at the end of each fishing season and if necessary, may consider additional measures to support stock rebuilding.

11.6. Prohibition on Shark Finning

DFO and the groundfish industry agreed to prohibit the practice of finning of dogfish and sharks off the west coast of Canada beginning in the 2012 fishing season. Though not a common practice in Canada, this action is in response to International concerns with fish handling practices in other jurisdictions, where the fins of sharks are removal at-sea and the remainder of the shark, sometimes still alive, is discarded overboard.

The prohibition is set out as a condition in all commercial groundfish licenses which states that no person shall remove and retain the fins of any Spiny Dogfish or shark without retaining the remainder of the carcass for validation upon landing. The number of fins landed shall correspond to the number of carcasses landed.

11.7. Groundfish Size Limits

Fishers are reminded of the following regulatory groundfish size limits:

11.7.1. Lingcod

Head-on: not less than 65 cm in length, measured from the tip of the nose to the tip of the tail.

Head-off: not less than 50 cm in length, measured along the shortest length of the body to the tip of the tail.

11.7.2. Sablefish

Head-on: not less than 55 cm in length, measured from the tip of the nose to the fork of the tail.

Head-off: not less than 39 cm in length, measured from the origin of the first dorsal fin to the fork of the tail.

12. TRAWL INDIVIDUAL VESSEL QUOTA ALLOCATIONS

For the 2016/2017 fishing year, the commercial groundfish trawl TACs, less the research allocation for the Groundfish Trawl Multi-species survey(s), are allocated as IVQ accordingly:

- i) 80 percent of each TAC will be allocated directly to groundfish trawl licensed vessels as IVQ based on the percentage of IVQ holdings for each species by species/area group held by each licence holder as of midnight February 2nd, 2016.
- ii) 20 percent of each TAC will be allocated to groundfish trawl licensed vessels in-season by the Minister of Fisheries and Oceans Canada, taking into consideration advice from the Groundfish Development Authority (GDA).

13. TRAWL INDIVIDUAL VESSEL ALLOCATION FORMULA

13.1. Initial 1997 Allocation Formula

In 1997, the initial formula used to allocate all groundfish species subject to TAC, with the exception of hake, was based 30 percent on vessel length and 70 percent on average catch of groundfish (excluding hake) during the five year term 1988 to 1992. For this purpose, the length of vessel used in the calculation is the length that was recorded on the Pacific Licensing System on March 31, 1997. The groundfish species included in the catch history calculations are all rockfish, all soles, pacific cod, lingcod, dogfish, sablefish and walleye pollock. For initial allocation purposes, quota catch history attributed to the licence is defined as the quantity of fish landed by the vessel holding that groundfish trawl licence at the time of landing.

The hake IVQ allocation formula was based 30 percent on vessel length, based on the total length of hake vessels only, and 70 percent on average hake catch history for the five year term 1987 to 1991. If a vessel had no history of hake previous 1992, but did participate in the fishery after this date, then they received an allocation based solely on the 30 percent vessel length. However, no vessel qualified for participation in the 30 percent vessel length allocation unless its average landings for the 1987 to 1991 period exceeded 2,000 pounds of hake, or its average landings for the 1992 to 1996 period exceeded that sum.

Based on the above two formulae, each fish harvester with a groundfish trawl licence received two initial IVQ allocations expressed as percentages; one for groundfish other than hake, and one for hake (which may be zero if they do not meet the qualifying criteria). These percentages were then applied to each area and species specific TAC to generate the area and species specific IVQ allocations.

13.2. Annual Allocation of Individual Vessel Quota

At the commencement of each fishing year, the percentage of each vessel's IVQ permanent holdings for each species and species/area group as of midnight February 2nd of the previous fishing year, are applied against the new year's groundfish trawl TAC's, less the quota allocated for research purposes, to determine the initial actual poundage of fish that a vessel may fish during that fishing season.

14. INDIVIDUAL VESSEL QUOTA REALLOCATION RULES

14.1. Reallocation Rules for Inter-Sector Non-T IVQ

The 2016/2017 IFMP provides for the temporary reallocation of IVQ between different groundfish licence sectors. Each sector has established reallocation rules that govern the temporary movement of IVQ between vessels into and within each sector. For the purposes of the groundfish trawl fishery, all IVQ originating from outside the trawl sector reallocated to the trawl sector will be referred to as Non-T IVQ. Specific rules governing the reallocation of Non-T IVQ are included below.

14.2. Groundfish Trawl 2016/2017 Reallocation Sector Rules

14.2.1. Reallocation Rules Effective February 21st, 2016

14.2.1.1. Upon application, groundfish trawl vessel owners will be permitted, subject to other requirements outlined below, to make unlimited permanent and temporary reallocations of groundfish IVQ or Non-T IVQ, subject to each individual groundfish trawl licence holdings cap and the fleet wide species caps set out in this plan.

14.2.1.2. Groundfish trawl IVQ and Non-T groundfish IVQ can be reallocated between groundfish trawl vessels holding a valid 2016/2017 groundfish trawl licence and vessels holding valid appropriate groundfish licences.

14.2.1.3. The IVQ percentage held on a groundfish trawl licence as of midnight February 2nd, 2016 will establish the initial permanent IVQ holdings for that groundfish trawl licence for the 2016/2017 season.

14.2.1.4. Requests for reallocation of groundfish IVQ must be received by DFO by 16:00 hours on February 2nd, 2017 in order to be processed and determine the permanent IVQ holdings for that groundfish trawl licence used for initial licence issuance for the 2017/2018 season.

14.2.1.5. Only uncaught IVQ is eligible for reallocation.

14.2.1.6. Permanent reallocation requests can submitted either as a percentage of IVQ of the TAC for that species/species area group (SAG) or in pounds. Any permanent reallocation request submitted in pounds will be interpreted as to include both the IVQ and Code of Conduct Quota (CCQ).

14.2.1.7. Permanent reallocations will be expressed as a percentage of the TAC and will be added to the receiving vessel's percentage of the TAC. (For example, the poundage on a groundfish trawl licence is dependent on the total TAC for the year multiplied by the percent of the allocation that vessel holds).

14.2.1.8. Requests for temporary reallocation un-fished IVQ must be received by GMU by 16:00 hours local time on February 20, 2017 in order to be processed and have affect in the current fishing season. Temporary reallocations of IVQ are only valid for the current fishing year.

14.2.1.9. The minimum quantity of IVQ that may be temporarily reallocated is one pound.

14.2.1.10. The maximum quantity of IVQ on a groundfish trawl licence is subject to the individual vessel holdings cap and coast-wide species caps.

14.3. Individual Vessel Quota Species Cap

14.3.1. Trawl sector Species Caps

The following species caps are set on a coast-wide basis for all IVQ species, except hake. The hake species caps are individually applied to Gulf hake and offshore hake allocated for onshore delivery and offshore hake for joint venture delivery. Only temporary quota reallocations are permitted to exceed the individual species holding cap to the temporary species cap level. Temporary vessel caps may be subject to adjustment in season.

Species	Permanent Species Cap	Temporary Species Cap
	(% of Trawl sector coast-wide TAC)	(% of Trawl sector coast-wide TAC)
Yellowtail Rockfish	5%	7%
Widow Rockfish	5%	7%
Canary Rockfish	4%	6%
Silvergrey Rockfish	4%	6%
Pacific Ocean Perch	5%	7%
Yellowmouth Rockfish	5%	5%
Rougeye Rockfish	7%	10%
Shorthead Rockfish	7%	10%
Redstripe Rockfish	5%	10%
Bocaccio Rockfish	4%	8%
Shortspine Thornyheads	10%	25%
Longspine Thornyheads	10%	25%
Redbanded Rockfish	7%	10%
Pacific Cod	4%	7%
Dover Sole	5%	10%
Rock Sole	5%	10%
Lemon (English) Sole	6%	12%
Petrale Sole	4%	6%
Lingcod	5%	10%
Spiny Dogfish	10%	10%
Sablefish	5%	7%
Pollock	10%	15%
Hake (Gulf of Georgia)	15%	15%
Hake (Offshore)	10%	10%
Big Skate	5%	5%
Longnose Skate	5%	5%
Arrowtooth Flounder	8.0%	15%

14.3.2. Incoming/Outgoing Non-Trawl Vessel Species Caps.

The following schedule sets out the effective dates and percentages of the individual vessel licence non-Trawl species holding caps in relation to the trawl incoming and outgoing sector caps set out in Section 9.2 of the Groundfish IFMP. These non-Trawl temporary vessel caps and dates may be subject to further adjustment in season.

Species	Non-T Temporary Species Cap Feb 21–Aug 31 (% of incoming/outgoing trawl sector cap)	Non-T Temporary Species Cap Sept 1–Oct 31 (% of incoming/outgoing trawl sector cap)	Non-T Temporary Species Cap Nov 1–Feb 20 (% of incoming/outgoing trawl sector cap)
Canary Rockfish	10%	10%	10%
Silvergrey Rockfish	10%	10%	10%
Rougeye Rockfish	5%	10%	20%
Shorthead Rockfish	5%	10%	20%
Shortspine Thornyheads	5%	10%	20%
Longspine Thornyheads	10%	10%	10%
Redbanded Rockfish	5%	10%	20%
Lingcod	10%	10%	10%
Spiny Dogfish	10%	10%	10%
Sablefish	10%	10%	10%
Big Skate	10%	10%	10%
Longnose Skate	10%	10%	10%
All other species	0%	0%	0%

14.4. Individual Vessel Quota Holdings Cap

Each groundfish trawl licence is subject to a total holdings cap. This cap has been set at a level that allows vessel owner(s) to adjust their IVQ holdings to a viable level while ensuring that operators cannot accumulate an unreasonably large amount of IVQ. Non-T IVQ and carryover/underage quota held on the licence will not be included in the calculation of holdings against the vessels individual holdings cap.

A reallocation request which results in one of the groundfish trawl licences involved holding more than its total IVQ holdings cap, measured in groundfish equivalents, will not be approved by Fisheries and Oceans Canada.

IVQ holdings caps were calculated for each groundfish trawl licence, during the first year of the IVQ program. The total IVQ holdings cap for each groundfish trawl licence was measured in groundfish equivalents (described below) as a percentage of total groundfish equivalents. These holdings caps, first determined in 1997, have been subject to increases to reflect the addition of new species to the IVQ program and to allow for modernization of the fleet.

In 2011 DFO and industry agreed to a two-step approach to allow a 25% increase in individual vessel's holdings cap. The first 15% increase was implemented during the 2011 season. The final 10% increase was implemented in the 2012 season.

14.4.1. Groundfish Equivalents

For the purposes of calculating the total IVQ holdings cap for each groundfish trawl licence, for measuring IVQ holdings of a groundfish trawl licence against its cap, and for quota swapping purposes, Fisheries and Oceans Canada has set the following groundfish

equivalents (GFE). GFE will be based on price relative to pacific ocean perch (pacific ocean perch = 1.00). These GFE values may be updated at the start of each fishing year.

Species	GFE
Yellowtail Rockfish	1.26
Widow Rockfish	0.96
Canary Rockfish	1.19
Silvergrey Rockfish	1.20
Pacific Ocean Perch	1.00
Yellowmouth Rockfish	1.19
Rougheye Rockfish	1.15
Shortraker Rockfish	1.24
Redstripe Rockfish	0.73
Shortspine Thornyheads	3.38
Longspine Thornyheads	3.38
Redbanded Rockfish	2.00
Bocaccio Rockfish	1.00
Yelloweye Rockfish	1.23
Quillback Rockfish	1.21
Copper, China and Tiger Rockfish	1.21
Pacific Cod	1.69
Dover Sole	1.33
Rock Sole	1.65
Lemon Sole	1.37
Petrale Sole	3.22
Lingcod	1.75
Spiny Dogfish	0.49
Sablefish	6.30
Pollock	0.66
Hake (Gulf of Georgia)	0.14
Hake (Offshore)	0.22
Big Skate	0.37
Longnose Skate	0.26
Arrowtooth Flounder	0.37

For example:	$10,000 \text{ lb. of Pacific Ocean Perch} + 10,000 \text{ lb. of lingcod}$ $= 10,000 \text{ lb. GFE} + 17,500 \text{ lb. GFE}$ $= 27,500 \text{ lb. GFE}$
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14.5. Quota Overage/Underage Rules

In addition to any of the rules set out in this plan, vessels that exceed by thirty (30) percent (%) the area specific IVQ holdings for a species (excluding Pacific Hake, Sablefish and Bocaccio rockfish which are fifteen (15) percent (%) and halibut at zero (0) percent (%)), shall be restricted to mid-water trawl fishing for the area in which the species IVQ has been exceeded for the remainder of the fishing year, or until such time as sufficient IVQ is transferred onto the groundfish trawl licence to cover overages in excess of the permitted amounts.

Fisheries and Oceans Canada will amend the licence conditions to restrict the vessel to mid-water trawling operations and deliver this amendment to the vessel owner by hand or by registered mail. The amendment will take effect from the date the licence amendment is provided to the vessel owner.

The groundfish trawl industry has reconfirmed its commitment to eliminate all directed fishing by the trawl fleet for Bocaccio, Yelloweye, Quillback, Copper, China and/or Tiger Rockfish. The trawl industry, as a disincentive to vessel owners, masters and crews, has also agreed to voluntarily relinquish all proceeds from the sale of these species landed to support groundfish research programs.

14.5.1. Quota Overage/Underage and Quota Carryover

To accommodate fishers in circumstances where catches do not meet the exact IVQ holdings in a given area for a given species, a carryover/underage policy has been implemented which allows fish harvesters to carry uncaught quota forward, or apply catch against its next year's IVQ allocation.

For all species of groundfish subject to IVQ, other than offshore Pacific hake, halibut by-catch and Non-T sablefish IVQ and Bocaccio rockfish the carryover/underage limit is thirty (30) percent of the vessels IVQ holdings for that particular species and species area group.

IVQ holdings used to calculate of overage/underage from one year to another only includes the sum of the Permanent IVQ, Temporary reallocated IVQ and CCQ held on the groundfish trawl licence. Neither GDQ, nor previous carryover quota, nor Non-T groundfish IVQ holdings held on the licence are used in the calculation of carryover quantities for the next season.

For onshore hake and joint venture hake (if applicable), the carryover/underage limit is fifteen (15) percent of the vessel's onshore hake IVQ holdings.

For halibut by-catch mortality, the underage limit is fifteen (15) percent of the vessel halibut by-catch IVQ holdings. ***There is no allowable overage for halibut by-catch mortality.***

For Non-T Sablefish IVQ the carryover/underage limit is fifteen (15) percent of the vessels Non-T sablefish coast wide holdings.

For Bocaccio IVQ the carryover/underage limit is fifteen (15) percent of the vessels Bocaccio holdings.

14.5.2. Rules for All Other Carryovers

Groundfish trawl licensed vessels landing up to thirty (30) percent over the species and area specific IVQ holdings, except for Non-T temporary Sablefish set at the fifteen (15) percent, may keep the proceeds from the overage but will have the equivalent poundage of the overage subtracted from the IVQ holdings of the licence in the following year. The trawl industry has agreed to an automatic voluntary relinquishment of all proceeds for the following species Bocaccio, Yelloweye, Quillback Copper, China and Tiger rockfish for use in support of groundfish research in British Columbia.

All groundfish trawl licensed vessel landings more than thirty (30) percent over the species and area specific IVQ holdings, except for Non-T temporary Sablefish which is at the fifteen (15) percent, must be relinquished for that groundfish trawl licence.

Vessels transferring additional IVQ onto the groundfish trawl licence following a quota overage and/or relinquishment will have the total overage (entire percent plus the relinquished amount) subtracted from the IVQ that is added to the groundfish trawl licence. The adjustment will be reflected in the groundfish trawl licence amendment. Relinquishments for prior overages will not be reimbursed.

If no further reallocations are processed, the total poundage of the all overages will be subtracted from the IVQ holdings of the licence in the following year.

IVQ overage/underage adjustments in the following year will be attributed to the groundfish trawl licensed vessel which did or did not fish the IVQ in the previous season.

IVQ overage/underage adjustments can be reallocated to any other licensed groundfish trawl vessel.

All weights are fresh round weights as determined by information collected from the dockside observers and at-sea observers.

Vessels in an overage situation can avoid a relinquishment by reallocating applicable IVQ prior to hailing out for the vessel's next trip or within 30 days, whichever comes first.

15. GROUND FISH DEVELOPMENT AUTHORITY

The Groundfish Development Authority (GDA) was established in 1997 as a result of an agreement reached between Fisheries and Oceans Canada and the British Columbia Ministry of Agriculture, Fisheries and Food (MAFF), to include the Coastal Communities Network (CCN) and fishing industry participants in a process that would continue to provide advice on the evolving west coast groundfish fishery.

The GDA provides advice on groundfish allocations to the Ministers of Fisheries for that portion of the TAC not allocated directly to fishers under the allocation formula. The intent of the recommendations was to allocate TAC in a manner that considers fair crew treatment, assists in regional development, promotes and attains a stable market, employment conditions and encourages sustainable fishing practices.

The GDA consists of seven members (Board of Directors) and a Standing Committee of two advisors (formerly called non-voting members of GDA), whose role it is to provide background information and expertise to the Board of Directors.

Details of the operation of the GDA, its members and terms of reference, objectives and criteria are set out in a separate GDA Operational Plan. The 2016/2017 GDA Operational Plan is available by contacting Charlie Minns, GDA Executive Director at (604) 943-3320 Fax (604) 943-1166, Cell phone (604) 880-1425 or email: cminns@dccnet.com.

15.1. Groundfish Development Quota

For 2016/2017, ten (10) percent of each groundfish trawl TAC will be allocated as Groundfish Development Quota (GDQ). The GDA, on the basis of joint proposals submitted by a processor and one or more groundfish trawl licensed vessel owners, provides advice to the Minister of Fisheries and Oceans Canada on how best to allocate to vessels involved in the joint proposals for GDQ. The GDA rates each proposal on the merits of the commitments made in the submitted operation plan in addressing the objectives of the GDA for the upcoming fishing year.

15.2. Code of Conduct Quota

Fisheries and Oceans Canada allocates ten (10) percent of each groundfish trawl TAC as Code of Conduct Quota (CCQ). It is intended to promote fair treatment of crew and safe vessel operation under the IVQ program.

CCQ is initially allocated according to each licence's CCQ rating and in proportion to the IVQ holdings for each species by species/area group on the groundfish trawl licence as of midnight, February 2nd of the previous fishing year.

Although each groundfish trawl licence has an initial one hundred (100) percent CCQ rating, the Minister may alter this rating as a result of advice from the GDA regarding the vessel compliance with the general principles set for the CCQ. The general principles, guidelines, and complaints procedure for CCQ are set out in the GDA 2016/2017 Operations Plan.

16. CATCH MONITORING AND VALIDATION

16.1. Catch Reporting

All groundfish trawl licensed vessels are required to accurately record and keep a record of all fishing activities in either a groundfish trawl fishing logbook, (see the example found on last page of this harvest plan) or new groundfish trawl industry new data management platform.

The fishing master must ensure that the fishing logbook or platform is available for use, and that prior to fishing that sufficient logbook pages, or hard drive space are available to cover all activities of the fishing trip. The fishing master is responsible for all required fishing event information is recorded for each fishing event, immediately after completion of the fishing event.

Completed original logbook pages or electronic logbook data must be submitted to the Department at the time of landing fish at the end of each trip.

The groundfish trawl sector has tasked the Canadian Groundfish Research and Conservation Society (CGRCS), on its behalf, to negotiate and secure a contract(s) for the provision of the groundfish trawl data management platform. The CGRCS has selected and contracted Integrated Quota Management Inc (IQMI) as the sole service provider for new data management platform for to the groundfish trawl fleet for the 2016/2017 fishing season

Details of the groundfish trawl data management platform are available by contacting Bruce Turris, the Executive Director of the CGRCS or at (604) 524-0005 Fax (604) 524-01510 or email: bruceturris@shaw.ca or IQMI at 604-250-2462 or email at: jesse@iqmi.ca,

16.2. Port Monitoring

A comprehensive industry funded one hundred (100) percent port monitoring program shall continue in the 2016/2017 fishing year.

All groundfish trawl licensed vessels, regardless of the area or species fished, must have all of their groundfish catches validated, whether landed in Canada or in the United States, to ensure that proper sorting, weight and enumeration by species occurs.

The groundfish trawl sector has tasked the Canadian Groundfish Research and Conservation Society (CGRCS), on its behalf, to negotiate and secure a contract(s) for the provision of the port monitoring services. The CGRCS has selected and contracted Archipelago Marine Research Ltd (AMR) as the sole service provider for port monitoring services to the groundfish trawl fleet for the 2016/2017 fishing season.

Details of the groundfish port monitoring program are available by contacting Bruce Turris, the Executive Director of the CGRCS or at (604) 524-0005 Fax (604) 524-01510 or email: bruceturris@shaw.ca or AMR at 1-800-663-7152,

Monitoring requirements in effect for the groundfish trawl IVQ fishery include the mandatory requirement to hail-out and hail-in for each trip and landing. Detailed catch verification, hail-out and hail-in requirements are found in the 2016/2017 Groundfish Trawl Conditions of Licence issued with each groundfish trawl licence.

Following completion of the trip, the service provider will finalize the catch record by assigning catch to management areas fished. This information will be forwarded to the vessel owner within 48 hours of the completion of the offload in the form of the Groundfish Quota Status Report. It is the responsibility of the vessel owner to ensure that the Groundfish Quota Status Report is on board the vessel prior to the commencement of the next fishing trip, and is made available, upon request, to a Fisheries and Oceans Canada certified observer.

For the 2016/2017 season there continues the opportunity for Option A vessels to land a portion the fish on board the vessel (either fresh, frozen or live) provided that the vessel master ensures that same groundfish at sea observer that was present on board the vessel during the fishing trip remains onboard for the next fishing trip. All fish caught during one fishing trip and not landed at the conclusion of that trip, must be landed at the conclusion of the next fishing trip.

This measure is to assist fishers and provide greater flexibility in managing their catch and reduce at-sea releases. Specific rules governing split and partial landings are set out in the terms and conditions of the Option A groundfish trawl licence. This privilege will be monitored by the Department in-season to ensure compliance, proper accounting, and control and management of the fishery, and may be subject to change.

Individual vessels may request modified offloading procedures, which are more applicable to their operation. If this is requested, departmental, CGRCS and/or contract personnel shall determine the feasibility of the modifications. Particulars of allowed offloading procedures are set out in the vessel's licence conditions.

16.3. At Sea Monitoring

Fisheries and Oceans Canada announced in May 2012 that DFO will no longer provide funding support for the provision of at-sea or electronic monitoring services in all regions of Canada as of April 1st, 2013. Responsibility for provision of monitoring services lies with the vessel master.

16.3.1. Option A Monitoring Requirements

The 100% at-sea observer coverage requirement for the Option A fleet continues to be in effect. This level of coverage enables DFO and the industry to maintain and strengthen stock assessment capabilities, to provide for effective area and species-specific management, and to effectively monitor by-catch under the highly complex IVQ management program.

The groundfish trawl sector has tasked the Canadian Groundfish Research and Conservation Society (CGRCS), on its behalf, to negotiate and secure a contract(s) for the provision of the required at-sea observer services. The CGRCS has selected and contracted Archipelago Marine Research Ltd as the sole service provider for the period January 1st, 2016 to December 31st, 2017.

Details of the groundfish trawl at-sea observer program are available by contacting Bruce Turris, the Executive Director of the CGRCS or at (604) 524-0005 Fax (604) 524-01510 or email: bruceturris@shaw.ca

Vessels choosing Fishing Option A are required to carry a DFO certified groundfish at-sea observer on all fishing trips during the 2016/2017 season except when the vessel is hailed out on either an Option-A shoreside hake trip or Option-A joint venture hake trip or Option-A Gulf Hake trip using mid-water for Pacific hake that delivers all fish caught as fresh round product to land or to a Canadian licence foreign fishing vessel (herein referred to as the DFO Exemption Guidelines for carrying an At-Sea Observer).

An Option A vessel when directed mid-water trawling for Pacific Hake in the Gulf of Georgia (4B) or in offshore waters is subject to one hundred (100) percent at-sea monitoring program for all fishing activities. Vessels masters mid water trawling for Pacific hake and delivering all fish caught as fresh round product to land in the shore based fishery or in the approved Joint Venture hake fishery may opt to utilize either an onboard at-sea observer or use an electronic monitoring system (EM). All vessel masters opting for use of an EM system while mid-water fishing for hake are subject to full retention (100%) of all fish caught with the exception of prohibited species.

In those situations where the vessel master may use either an at-sea observer or an Electronic Monitoring (EM) system, and the vessel master opts to use an EM system, the vessel shall have an EM system that meets the requirements as stated in the licence conditions for that vessel.

Where an EM system is in use on a vessel, the vessel master shall ensure all components of the EM system are fully operational and in use during the entire fishing trip from the time the vessel leaves port until the vessel arrives at port to commence the validation of their catch. The EM system shall be continuously powered and not turned off at any time.

If at any time during a fishing trip the EM system fails to function as required by licence conditions the vessel is deemed to have failed to comply with these exemption guidelines and may be directed to carry an at-sea observer at the discretion of a fishery officer.

At-sea monitoring requirements for vessels directed midwater fishing for hake will be discussed prior to the start of the 2016 hake fishery and thus may be subject to inseason modification.

A vessel which is on a dedicated offshore hake trip without an at-sea observer on board is permitted a ten (10) percent by-catch allowance of other groundfish, excluding sablefish, halibut and walleye pollock, subject to available IVQ holdings. The by-catch allowance for walleye pollock is restricted to thirty (30) percent of the offshore hake landing. Any catch of groundfish (other than hake) in excess of the set allowance must be relinquished. All by-catch will be deducted from the vessel's IVQ holdings. Fishers who may wish to retain more than the by-catch allowance while on a dedicated hake trip must carry an at-sea observer for that trip.

16.3.2. Criteria to Disembark At-Sea Observers

If a vessel has discontinued fishing and is transiting directly to an offloading port, the vessel master may request that the observer may disembark in Port Hardy, Victoria, Ucluelet or Prince Rupert. The following requirements shall apply:

- i) A hail-in as described in the Conditions of the 2016/2017 Groundfish Trawl Licence shall be made to the designated service provider.
- ii) The use of Port Hardy shall only be considered when the vessel is transiting southbound between Vancouver Island and the mainland of British Columbia.
- iii) The use of Victoria shall only be considered when the vessel is transiting eastbound to a Canadian landing port or transiting southbound to Blaine, Bellingham or Anacortes in Washington State.
- iv) The use of Ucluelet shall only be considered when the vessel is transiting directly to Port Alberni, southbound to a Canadian landing port or to Blaine, Bellingham or Anacortes in Washington State.
- v) The use of Prince Rupert shall only be considered when a vessel is transiting southbound between Vancouver Island and the Mainland of British Columbia to a Canadian landing port or to the ports of Blaine, Bellingham or Anacortes in Washington State.

16.3.3. Option B At-Sea Monitoring requirements

All Option B groundfish trawl vessel are subject to a mandatory one hundred (100) percent at-sea monitoring program for all fishing activities. Vessels masters may opt to utilize either an onboard at-sea observer or use an electronic monitoring system (EM). It is the responsibility of the vessel master to ensure arrangements for at-sea monitoring services are in place prior to commencement of any fishing operations.

In those situations the vessel master when utilizing an EM system instead of a designated groundfish at-sea observer the vessel master shall ensure the vessel is equipped with an EM system that meets the requirements set out in the conditions of groundfish trawl licence for that vessel.

Where an EM system is in use on a vessel, the vessel master shall ensure all components of the EM system are fully operational and in use during the entire fishing trip from the time the vessel leaves port until the vessel arrives at port to commence the validation of their catch. The EM system shall be continuously powered and not turned off at any time.

If at any time during a fishing trip the EM system fails to function as required by licence conditions the vessel is deemed to have failed to comply with these exemption guidelines and may be directed to carry an at-sea observer at the discretion of a fishery officer.

16.4. Conversion Factors

To facilitate the conversion of product weight to round weight for the purposes of monitoring catches against TAC and IVQ holdings, the Department shall use set conversion factors and ice/slime and glaze allowances.

The factors and allowances that shall be used at the commencement of the 2016/2017 fishery are set out in the conditions of each groundfish trawl licence. As changes may be made in-season, the conditions of the groundfish trawl licence should be referenced to determine what factors and allowances are in effect at any time.

Individual vessels may request in writing to use different conversion factors and/or ice/glaze allowances, which are more applicable to their operation. Testing will be conducted to verify the applicability of different conversion factors/ice/glaze allowance. To facilitate this request verification of these different factors will be conducted at the owner's expense that includes product samples and approved contract personal. Where at-sea testing is required, such testing by DFO approved protocols by approved contract personnel. Test results may result in DFO amending licence conditions/dockside monitoring protocols to reflect agreed upon new factors. Further testing may be required in-season to verify the continued appropriateness of the amended factors.

17. HALIBUT BY-CATCH MANAGEMENT PLAN

17.1. Halibut Prohibition

Halibut caught while fishing under the authority of a groundfish trawl licence cannot be retained and must be returned to the water as quickly as possible.

17.2. Halibut Mortality Fleet Cap

For the 2016/2017 fishing year, the halibut by-catch mortality cap for the trawl fleet is set at 1,000,000 pounds (~454 tonnes). All estimated halibut by-catch mortality will be deducted from a vessel's individual cap.

17.3. Halibut Species Mortality Cap

No groundfish trawl licence can hold permanently more than four (4) percent of the total halibut by-catch mortality cap for the trawl fleet. No groundfish trawl licence can hold temporarily more than eight (8) percent of the total halibut by-catch mortality cap for the trawl fleet.

17.4. Halibut By-catch Reallocation

Uncaught halibut by-catch mortality IVQ can be reallocated, subject to the halibut species mortality cap rules set out above. Halibut by-catch IVQ is not to be considered as part of the groundfish trawl vessel's groundfish IVQ holdings for holdings cap calculations/limits.

17.5. Halibut By-catch Quota Overage

Halibut catch in excess of a vessel's individual halibut by-catch cap will result in the vessel being restricted to mid-water species coast-wide for the remainder of the fishing year, or until sufficient additional halibut by-catch cap is reallocated onto the groundfish trawl licence to cover the overage. For the proper conservation and management of the resource, halibut overages in the current year will be deducted from the groundfish trawl licence's halibut by-catch mortality cap allocation in the following year.

17.6. Halibut By-catch Underage

A groundfish trawl licensed vessel may carry forward up to fifteen (15) percent of their halibut by-catch mortality holdings that are uncaught into the following fishing season.

18. HABITAT CONSERVATION MEASURES: CORALS AND SPONGES

The Canadian Groundfish Research and Conservation Society, on behalf of the British Columbia groundfish trawl industry, and the Pacific Marine Conservation Caucus agreed in 2012 to innovative restrictive management measures to provide additional protection of Coral and Sponge Habitat off the west coast of Canada. The objectives of this agreement are:

- To reduce and manage the catch of corals and sponges by the British Columbia groundfish bottom trawl fishery with a management objective of an annual coral and sponge fleet-wide catch at the 2009 level or lower (coral 562 kg, sponge 322 kg);
- To reduce the impact of the British Columbia groundfish bottom trawl fishery on low energy and low productivity environments in deep waters off of the west coast of British Columbia;
- To ensure that the British Columbia groundfish bottom trawl fishery does not disproportionately affect any one particular benthic habitat type;
- To ensure that the British Columbia groundfish bottom trawl fishery is restricted to areas previously trawled between 1996-2011;
- To improve the performance of the British Columbia groundfish bottom trawl fishery against habitat criteria used to evaluate the sustainability of fisheries.

To achieve these objectives the following management measures were agreed to:

- Freeze the footprint of where groundfish bottom trawl activities can occur (see section 18.10).
- Establishing a combined habitat bycatch conservation limit (HBCL) for coral and sponges.
- Allocating the HBCL among groundfish trawl licence holders and allow for transferability within specified vessel caps with the groundfish trawl fleet,
- The establishment of an encounter protocol for trawl tows where combined coral and sponge catch exceeds 20 kg.

The Groundfish Trawl Advisory Committee (GTAC) at its January 11, 2012 meeting approved of these measures and recommended that the Department implement them into the groundfish Integrated Fisheries Management Plan. The specific management measures adopted are below:

18.1. Coral and Sponge Retention Rules

Corals and Sponges are not permitted to be retained unless authorized by Fisheries and Oceans Canada.

18.2. Fleet-wide Habitat Bycatch Conservation Limit

For the 2016/2017 fishing year, the coastwide HBCL for the trawl fleet is set at 9,921 pounds (4500 kilograms). All estimated sponge and coral bycatch mortality will be assessed against a vessel's individual HBCL. The mortality rate applied to all coral and sponge catch is 100 %.

18.3. Corals and Sponges Subject to Management Measures

Species Taxonomic groupings of corals and sponges used by the observer program, and included in the Habitat Bycatch Conservation Limit:

Coral	Coral	Sponge
Hexacorallia	Primnoa	Calcareous
Stony	Stylatula elongate	Glass
Alcyonaria	Sea pens	Bath
Gorgonian	Sea whips	
Paragorgia arborea	Virgularia	
Paragorgia pacifica		

18.4. Habitat Bycatch Conservation Limit Mortality Cap

No Category "T" license will be authorized a permanent allocation that exceeds 4% and a combined permanent and temporary allocation that exceeds 30% of the coastwide HBCL for either coral or sponge. The initial annual temporary cap will be set at 6% of the coastwide HBCL. Changes to the initial temporary cap will be made by DFO after receiving advice through the Groundfish Trawl Advisory Committee.

18.5. Habitat Bycatch Conservation Limit Reallocation

Uncaught HBCL IVQ can be reallocated, subject to the cap rules set out above. HBCL IVQ is not to be considered as part of the groundfish trawl vessel's groundfish IVQ holdings for holdings cap calculations/limits.

18.6. Habitat Bycatch Conservation Limit Quota Overage

The individual HBCL will hold each vessel accountable and responsible for all capture of coral and sponge. HBCL catch in excess of a vessel's individual HBCL will result in the vessel being restricted from groundfish bottom trawling coast-wide for the remainder of the fishing year, or until sufficient additional HBCL is reallocated onto the groundfish trawl licence to cover the overage.

18.7. Habitat Bycatch Conservation Limit Underage

Category "T" licenses vessels are permitted to carry forward annually a maximum amount of uncaught individual HBCL equal to 10% of the total HBCL issued to the license. The equivalent weight will be added to the vessel's HBCL allocation in the following year.

18.8. Habitat Conservation Review Committee

The BC groundfish trawl industry, MCC and Fisheries and Oceans Canada staff agree to work collaboratively in the monitoring and evaluation of the habitat conservation measures.

A joint Habitat Conservation Review Committee (HCRC) will be established to review and assess annually and over time:

1. Compliance with the established groundfish bottom trawl boundaries and agreement to avoid non-trawled areas within the footprint;
2. The area covered and the level of effort by the Option A groundfish bottom trawl fishery, by depth strata, eco-region, and substrate type;
3. Total catch of coral and sponge, number of transfers of individual HBCL, amount of coral and sponge individual HBCL carryover of underage or overage;
4. Coral and sponge hotspots, including but not limited to those identified through the encounter protocol;
5. At-sea and dockside coral and sponge reporting procedures and requirements;
6. The effectiveness of the individual HBCLs at providing incentives for minimizing capture of coral and sponge and consideration in the development of further habitat management measures.

Advice on changes from the HCRC will be brought to the Groundfish Trawl Advisory Committee for discussion.

18.9. Encounter Protocol

Observer data collected from the British Columbia groundfish trawl fishery between the years of 2005-2009 indicate that the vast majority of coral/sponge bycatch events result in less than 20 kilograms caught in one tow. A catch of more than 20 kilograms in one tow, therefore, is a rare event and indicates a potential interaction with a substantial coral and/or sponge aggregation. Such situations require an “encounter protocol”. Essentially, an encounter protocol is a rapid-response procedure to re-direct bottom trawl fishing activity away from the area, in order to limit further damage to the recently-encountered coral/sponge aggregation. The initial protocol catch level is set at 20 kilograms of coral and sponge combined, but will be reviewed annually.

In the event that a vessel catches more than 20 kilograms of combined coral and sponge in a single tow, the following procedure will occur:

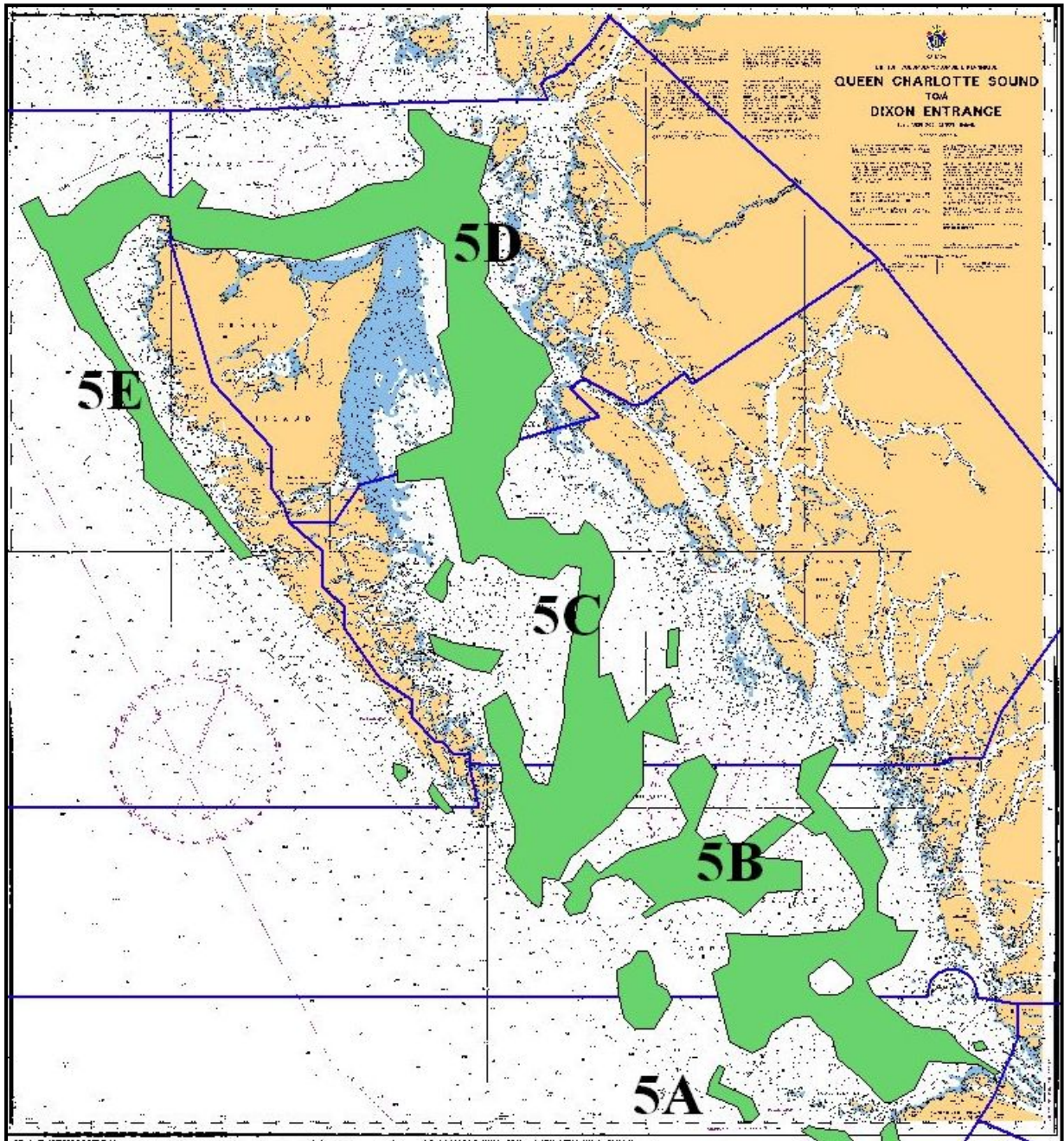
1. The at-sea observer will collect information;
2. Information about the location of the coral or sponge capture, and the amounts caught, will be communicated to the trawl industry through the Quota Status Reports that are updated on a daily basis;
3. Vessels will be encouraged to avoid the area where the bycatch of coral and sponge occurred;
4. The incident, and the response of the fleet to the encounter, will be reviewed by the Habitat Conservation Review Committee. This procedure will be followed any time a vessel catches more than 20 kilograms of combined corals or sponges in one tow, regardless of that vessel’s HBCL holdings at the time. The vessel is still responsible for covering the coral/sponge catch with individual HBCL.

18.10. Areas Permitted to be Fished

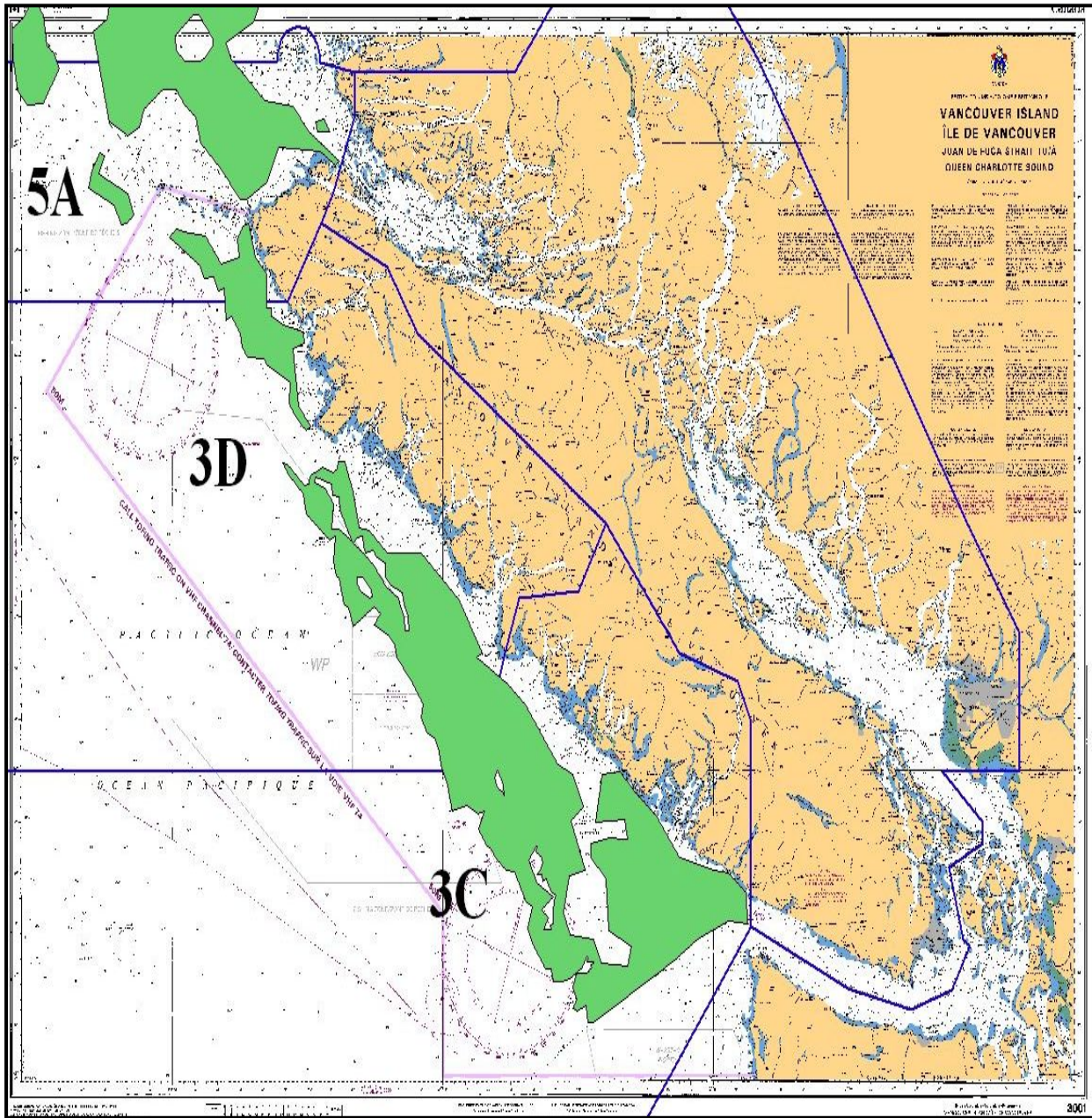
All vessels fishing bottom trawl under the authority of a valid Category “T” commercial Groundfish trawl license selecting Option A as identified in the Groundfish Trawl Commercial Harvest Plan within the Pacific Region Integrated Fisheries Management Plan for Groundfish are permitted to fish with bottom trawl gear within the boundaries outlined in the two graphics below, notwithstanding other seasonal closures, Rockfish Conservation Closed Areas and Glass Sponge Reef Closed Areas set out within this plan. All areas found outside the outlined areas, except with Area 4B (Area 12 to 20 and 29) are closed to fishing

with bottom trawl gear year round. The graphics below are for illustration purposes only. A full description of the Open and Closed areas boundaries are set out in Section 6 of this plan.

Queen Charlotte Sound, Hecate Strait and West coast of Gwaii Haanas Islands footprint.



West Coast of Vancouver Island footprint



19. FISH RELEASED AT SEA

The mortality of all species of groundfish (including Non-T IVQ) that are released at-sea shall be levied as catch against a vessel's IVQ holdings or annual TAC subject to mortality rates below.

The weight of fish released at sea will be multiplied by the mortality rate set out below to calculate released mortality.

19.1. Mortality Rates

Mortality rates for fish released at sea are as follows:

Species	Mortality Rates
Soles	10% mortality for the first two hours fished or portion thereof and, 10% for each additional hour ¹ .
Lingcod	10% mortality for the first two hours fished or portion thereof and, 10% for each additional hour ¹ .
Sablefish	10% mortality for the first two hours fished or portion thereof and, 10% for each additional hour ¹ .
Pacific Cod And Pollock	25% mortality for the first two hours fished or portion thereof and, 25% for each additional hour ¹ .
Spiny Dogfish	5% mortality for the first two hours fished or portion thereof and, 5% for each additional hour.
Big and Longnose Skate	5% mortality for the first two hours fished or portion thereof and, 5% for each additional hour.
All Rockfish	100% mortality regardless of time fished.
Longspine/ Shortspine Thornyhead	100% mortality regardless of time fished.
Arrowtooth Flounder	100% mortality regardless of time fished
Pacific Hake	100% mortality regardless of time fished
¹ Fishing time is defined as the period following shooting of the gear during which the trawl winches are locked. For that portion of a tow time less than 60 minutes, mortality rate shall be determined by multiplying the number of full hours of the tow by the mortality rate and adding to that the ratio of the portion of an hour by the applicable mortality rate to determine the overall mortality of the species for that tow. For a 2 hour and 20 minute tow the formula used to determine sablefish mortality is: ((2hrs x 10%)* est. release weight) + (((20min/60min) x 10%)* released weight)	

The above mortality rates do not necessarily reflect true mortality rates of fish released at-sea, but are intended to provide incentives for vessel operators to reduce towing time and avoid by-catch wherever possible.

All fish landed shall be levied as catch against the appropriate area and species-specific IVQ or by-catch cap.

For halibut, a DFO certified at-sea observer shall assess the condition of each fish before it is returned to the water in order to apply the appropriate mortality factor. Halibut mortality condition factors used by the at-sea observer for the Canadian trawl fishery were developed by the International Pacific Halibut Commission.

20. SPECIES AT RISK SHARK ENCOUNTER PROTOCOL

Since the 2012/2013 season, the Groundfish trawl industry in support of Fisheries and Oceans Canada's increased conservation efforts for some Elasmobranchs, and in particular those listed as SARA species, supports a prohibition on the selling and retention of Pacific Basking Shark, Tope (Soupfin) Shark or Bluntnose Sixgill Shark in the British Columbia groundfish trawl fishery.

Additionally, cognizant of the international efforts taken to protect shark species, the groundfish trawl industry agreed to eliminate all directed fishing for shark species, other than Pacific Spiny Dogfish, as of the 2012/2013 season.

It is important to recognize that most current encounters of these and other shark species are not targeted, the industry in conjunction with the Department has initiated discussions to develop practical measures and protocols that may minimize encounters and mortality.

These measures include:

- modification of fishing plans to remove all directed fishing for sharks, other than Spiny Dogfish.
- modifications of fishing practices by taking into account advice and experience of other harvesters regarding areas of higher shark abundance and densities
- investigation of trawl gear modifications, such as mesh sizes, excluder grids or acoustic deterrent devices, which may lead to reduce interactions of sharks and trawl fishing gear.
- developing fishing plans that take in to account avoidance of known important habitats for sharks (such as pupping and nursery habitats) and migratory routes.

Specifically for Pacific Basking shark, pursuant to subsection 73(2) (c) and section 74 of the Species at Risk Act (SARA), the vessel master, prior to and while conducting fishing activities, shall ensure that:

- every measure will be taken to avoid the incidental capture of the Pacific Basking Shark.
- fishing gear is not set or hauled when Pacific Basking Sharks are within 10 metres of the fishing vessel, and/or are visible at the water's surface.
- any Pacific Basking Shark, Tope (Soupfin) Shark or Bluntnose Sixgill Shark incidentally caught and alive, is released in a manner that causes them the least harm, subject to completion of DFO Bio-sampling protocols.

Bio-sampling protocol

When capture of any of Pacific Basking Shark, Tope (Soupfin) Shark or Bluntnose Sixgill Shark occurs the vessel master, prior to the fish's release (alive if possible), shall ensure that the bio-sampling requirements as set out by DFO are conducted as quickly as possible by the onboard at-sea observer or a member of the vessel's crew.

The fishing master shall ensure that any bio-samples gathered are retained and stored to DFO requirements and such samples are provided in a secure manner to DFO upon termination of the trip.

21. HAKE FISHERY

The offshore pacific hake fishery will be managed under the general IVQ program in place for the groundfish trawl fishery. On Nov. 21, 2003, an Agreement between the Government of the Canada and the Government of United States on Pacific Hake/Whiting was signed.

The agreement establishes agreed percentage shares of the transboundary stock of Pacific hake, also known as Pacific whiting. It also creates a process through which scientists and fisheries managers from both countries will recommend the total catch of Pacific hake each year. The agreement anticipates that stakeholders from both countries will have significant input into this process.

The agreement, implemented for the first time in 2012, created four bodies to assist the governments of Canada and the United States to assess and sustainably manage the shared resource:

- The Joint Management Committee (JMC) is charged with determining the Total Allowable Catch of hake/whiting every year.
- The industry Advisory Panel (AP) is charged with reviewing the management of the fishery and making recommendations to the JMC regarding the overall Total Allowable Catch.
- The Joint Technical Committee (JTC) is charged with annually providing the JMC with a stock assessment that includes scientific advice on the annual potential yield of the offshore hake/whiting resource that may be caught for that fishing year.
- The Scientific Review Group (SRG) is charged with providing an independent peer review of the work of the JTC.

Additional details on the Canada/US Treaty process can be found at:

<http://www.nwr.noaa.gov/Groundfish-Halibut/Groundfish-Fishery-Management/Whiting-Management/Treaty.cfm>

The 2016/2017 offshore hake TAC and further details of the in-season management measures will be set out in an addendum to this harvest plan once the above process has been completed and approved by DFO. Industry consultations on the addendum will be initiated in February 2016.

22. EXAMPLE OF GROUND FISH TRAWL FISHING LOGBOOK

Fisheries and Oceans / Pêches et Océans Canada		GROUND FISH TRAWL FISHING INFORMATION LOG										Page <u>2</u> of <u>2</u>	
Vessel Name SEA WATER		VRN# 29999		Licence # T0155		Trip # 55		Hull Out# 21810476					
Captain JOHN DOE		CAPT. FIN # 1234567		Port of Landing UCL		Hull In# 21824596							
At Sea Observer DON TRIP		Code 18637		Orifield Location BORNSTEIN		Departure Date 20/05/04							
				Buyer/Processor SEA DRIFT		Landing Date 30/05/04							
Tow #	BT or MT	003		BT		004							
Date		26/05/04		26/05/04									
Name of Grounds		C. SCOTT SPITT		C. SCOTT SPITT									
Fishing Area		127-04		127-04									
Time (24hr clock)		0745		0950		1045		1200					
Set: Latitude		504351		504351		504351		504351					
Longitude		283850		283850		283850		283850					
Mid: Latitude		504210		504210		504210		504210					
Longitude		282820		282723		282723		282723					
Haul: Latitude		504291		504291		504291		504291					
Longitude		282723		282723		282723		282723					
Fishing Depth		41		36		41		36					
Meters	Fathoms	36		36		36		36					
Tow Speed -	Codend	34		34		34		34					
Gear Depth		40		250		40		250					
Spread		45		24		37		19					
TS - Target Species	TS	retained (lb)	released (lb)	TS	retained (lb)	released (lb)	TS	retained (lb)	released (lb)	TS	retained (lb)	released (lb)	
418 Yellowtail RF													
417 Widow RF													
437 Canary RF													
406 Silvergrey RF													
396 Pacific Ocean Perch													
440 Yellowmouth RF													
394 Roughie RF													
408 Shortraker RF													
439 Redstripe RF													
401 Redbanded RF													
435 Bocaccio													
451 Shortspine TH	3		0	3	1	10							
453 Longspine TH													
626 Dover Sole	1	14000	100	1	20000	100							
621 Rock Sole													
628 Lemon Sole													
607 Petrale Sole													
610 Rex Sole													
631 Starry Flounder													
602 Turbot	2	100		2	500								
222 Pacific Cod													
467 Lingcod													
044 Dogfish													
455 Sablefish													
228 Pollock													
225 Hake													
056 Big Skate		200			100								
059 Longnose Skate													
540 Cabezon													
472 Sculpin													
614 Halibut		X X X X X X	130	X X X X X X	130	X X X X X X				X X X X X X			
Tow Comments:	WEATHER GETTING BAD			CUT TRIP SHORT BAD									
	GOING TO MAKE ONE			WEATHER!									
	MORE TOW.												
Log removed by:													

Appendix 9: Rebuilding Plans for Groundfish Species

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1.0 FOREWORD

Fisheries and Oceans Canada (DFO) has developed “*A Fisheries Decision-Making Framework Incorporating the Precautionary Approach*” (PA Framework) under the auspices of the Sustainable Fisheries Framework. It outlines the departmental methodology for applying the precautionary approach (PA) to Canadian fisheries. A key component of the PA Framework requires that when a stock has reached or fallen below a limit reference point (LRP), a rebuilding plan must be in place with the aim of having a high probability of the stock growing above the LRP within a reasonable timeframe.

The purpose of rebuilding plans is to identify the main objectives and requirements for any species below an LRP (i.e., in the “critical zone” of the PA Framework), as well as the management measures that will be used to achieve these objectives.

This appendix outlines rebuilding plans for groundfish species that (a) have been identified by peer reviewed stock assessments as currently in the critical zone under the PA framework and (b) are not covered by other management planning tools for depleted species, such as Species At Risk Act-listed species that require a recovery plan or management plan.

This document also serves to communicate the basic information on the stock(s) and its management to DFO staff, legislated co-management boards and other fishery interests. This plan provides a common understanding of the basic “rules” for rebuilding the stock(s). The objectives and measures outlined in this plan are applicable as long as the stock(s) is below the LRP. Once the stock grows and remains consistently above the LRP, the stock(s) will be managed through the provisions of the Groundfish IFMP.

Management measures outlined in this rebuilding plan are mandatory, and may be modified to include additional catch restrictions if they fail to result in stock rebuilding.

This rebuilding plan is not a legally binding instrument which can form the basis of a legal challenge. The plan can be modified at any time and does not fetter the Minister's discretionary powers set out in the *Fisheries Act*. The Minister can, for reasons of conservation or for any other valid reasons, modify any provision of the rebuilding plan in accordance with the powers granted pursuant to the *Fisheries Act*.

Where DFO is responsible for implementing a rebuilding plan in an area under a land claim agreement, the rebuilding plan will be implemented in a manner consistent with that agreement.

2.0 INTRODUCTION

The groundfish species currently subject to rebuilding plan provisions are: Bocaccio rockfish and the outside population of Yelloweye rockfish.

3.0 OVERVIEW OF THE FISHERY

These species are known to be caught in the fisheries listed below, which occur coastwide, though they may also be caught in other fisheries.

- Commercial fisheries: Bocaccio are primarily caught incidentally in several fisheries: groundfish trawl, groundfish hook and line and trap, and salmon troll. Yelloweye are primarily caught in the groundfish hook and line fisheries as incidental and targeted catch, and are also caught incidentally in the groundfish trawl and salmon troll fisheries.
- Recreational fisheries: Bocaccio are primarily caught incidentally by recreational anglers when fishing for rockfish, Lingcod, and salmon. Some anglers will target Yelloweye and others will catch them incidentally when fishing for Lingcod or salmon.
- Food, Social, and Ceremonial fisheries: catch reports include records of Bocaccio, Yelloweye. Yelloweye is much more commonly reported as catch than Bocaccio.

Catch information for these species in the commercial salmon troll fishery, recreational fisheries, and Food, Social, and Ceremonial fisheries is limited.

4.0 BIOLOGICAL SYNOPSIS AND STOCK STATUS

Bocaccio

Bocaccio are long lived and slow growing; generation time is treated as 20 years in the most recent stock assessment. Currently, Bocaccio are treated as a single coastwide stock. They are found over various bottom types, most commonly off bottom in depths of 60-340 m.

DFO Science published a stock assessment for Bocaccio in 2009 which was updated in 2012. The 2012 assessment reported a median estimate of B_{2012}/K (the ratio of 2012 stock size to the unfished stock size) of 3.5%. The median estimate of B_{2012}/B_{msy} (the ratio of 2012 stock size to that at maximum sustainable yield) was reported as 7.0%.

The assessment estimated that the stock had a 99% probability of being in the PA critical zone, whereby $B_{2012} < 0.4 * B_{msy}$, and indicated that there was at least a 90% likelihood that the population has continued to decline since 2002, despite total catches during that period being among the lowest in the history of the fishery.

The species was recommended as “threatened” by the Committee On The Status Of Endangered Wildlife In Canada (COSEWIC) in 2006. Following consultation and review, the Government of Canada decided not to add Bocaccio to the list of wildlife species at risk. COSEWIC

reassessed Bocaccio in November 2013 and recommended it as “endangered”: http://www.cosewic.gc.ca/rpts/detailed_species_assessments_e.html.

Detailed descriptions of available information on Bocaccio biology and distribution, habitat requirements, and stock scenarios, are included in the “Updated stock assessment for Bocaccio (*Sebastes paucispinis*) in British Columbia waters for 2012” report and the 2009 “Recovery Potential Assessment of Bocaccio in British Columbia Waters”, which can both be found online on the DFO WAVES catalogue at: <http://waves-vagues.dfo-mpo.gc.ca/waves-vagues/>.

Yelloweye - outside population

Yelloweye are long lived, slow growing; average female age at maturity is estimated as 15 years in the 2015 stock assessment of the outside population¹. Adults of the species are generally sedentary and show some site fidelity. Management of the outside population in commercial groundfish fisheries is broken down into several management areas; management measures in the recreational fishery also vary between the south coast and central and north coast. Yelloweye are generally found over rocky bottom types, with juveniles tending to occupy shallower habitats than adults.

DFO Science published a stock assessment for the outside population of Yelloweye in 2015. The assessment reported a median estimate of B_{2014}/B_o (the ratio of 2014 stock size to the unfished stock size) of 18%. The median estimate of B_{2014}/B_{msy} (the ratio of 2014 stock size to that at maximum sustainable yield) was reported as 36%.

The assessment estimated that the stock had a 63% probability of being in the PA critical zone, whereby $B_{2014} < 0.4 * B_{msy}$. It also estimated that the 2014 biomass is 60% of the biomass in 2002, when the first of numerous catch reduction measures were introduced under the Rockfish Conservation Strategy.

The outside and inside populations of this species were recommended as “Special Concern” by the Committee On The Status Of Endangered Wildlife In Canada (COSEWIC) in 2008 and listed under the Species at Risk Act as “Special Concern” in 2011.

Detailed descriptions of available information on Yelloweye biology and distribution, habitat requirements, and stock scenarios, are included in the “Stock Assessment for the Outside Population of Yelloweye Rockfish (*Sebastes Ruberrimus*) for British Columbia, Canada in 2014.”

5.0 SOCIO-ECONOMIC AND CULTURAL IMPORTANCE

As described above, Bocaccio and Yelloweye are components of the catch in multiple fisheries. The “social, cultural, and economic importance” sections of the corresponding IFMPs such as groundfish and salmon describe the importance of these fisheries.

6.0 MANAGEMENT ISSUES

¹ The outside population of Yelloweye rockfish corresponds with Groundfish Management Areas 3 and 5.

Harvests in the commercial groundfish fisheries are assumed to be the major current source of human-induced mortality for both species. The largest proportion of the estimated catch of Bocaccio occurs in the groundfish trawl fishery. Smaller amounts of estimated Bocaccio catch (groundfish hook and line, salmon troll, recreational, FSC) contribute some additional mortality.

Commercial catch of Yelloweye is largest in the Pacific Halibut and Rockfish-Outside fisheries. Catches of Bocaccio in US waters from California to Washington may also have some impact on the BC population, but there is currently no means of assessing this impact. The recreational catch of Yelloweye also comprises a significant proportion of the total fishing mortality.

Limited information on Bocaccio biology has meant that little is known regarding the role of any habitat limitations or predator-prey interactions in Bocaccio rebuilding. Increased seal predation, biogenic habitat loss (e.g., corals and sponges), and decreased dissolved oxygen levels have all been identified as potential threats.

Yelloweye are preyed upon by whales, Harbour Seals, and sea lions; juveniles are also subject to predation by Chinook Salmon, rockfishes, Lingcod and marine birds. The extent to which predation or other factors pose threats to Yelloweye rebuilding is not well understood.

7.0 OBJECTIVES

To support the development and achievement of objectives, DFO set out four key considerations in discussions with fishing interests that guided the rebuilding approach for Bocaccio and Yelloweye:

1. *Conservation* – Identified in the PA Framework as the primary consideration for stocks in the critical zone.
2. *Shared responsibility* – Address all relevant sectors in the development of rebuilding efforts.
3. *Long term planning* – Given current stock status, Bocaccio life history, and catch reductions already implemented, sustainable long measures are key.
4. *Adaptive management* – regular reviews of performance against objectives and targets with implementation of additional management measures to meet them if required. Objectives and targets (e.g., the mortality caps described below) may also be adjusted if required.

The primary objective of any rebuilding plan, outlined in the PA Framework, is to:

Promote stock growth out of the critical zone ($B > 0.4 B_{msy}$) by ensuring removals from all fishing sources are kept to the lowest possible level until the stock has cleared this zone. There will be no tolerance for preventable decline. This objective remains the same whether the stock is declining, stable, or increasing.

DFO's "Guidance for the Development of Rebuilding Plans under the Precautionary Approach Framework" specifies that a timeline and an acceptable probability for achieving the objective should be defined, and that a broader ecosystem context for rebuilding should be considered.

Bocaccio

For Bocaccio, its severely depleted current status, slow growth, and long generation times all contribute to high levels of uncertainty associated with long term predictions of stock trajectory, and consequently, moderate probabilities of rebuilding the stock out of the critical zone in the near future. Taking this into account, the DFO Groundfish Management Unit has refined the primary objective described above to specify that the aim is to also:

Achieve rebuilding throughout the species' range and grow out of the critical zone within three generations, with a 65% probability of success.

To support and monitor progress towards the objective, milestones have also been established:

Achieve a positive stock trajectory trend in each 5 year interval, such that the biomass at the end of each 5 year period is greater than the biomass at the beginning of the same 5 year period. Between major assessments, progress towards this goal will be monitored by annually reviewing fishery dependent and fishery independent indices of stock trajectory.

Yelloweye - outside population

The status of the outside population of Yelloweye is slightly better relative to unfished biomass than it is for Bocaccio. However Yelloweye are also slow growing, low productivity, and have long generation times. Taking this into account, the DFO Groundfish Management Unit has refined the primary objective described above to specify that the aim for Yelloweye is to also:

Achieve rebuilding throughout the outside stock's range and grow out of the critical zone within 15 years, with a 57% probability of success.

To support and monitor progress towards the objective, milestones have also been established:

Achieve a positive outside stock trajectory trend in each 10 year interval, such that the biomass at the end of each 10 year period is greater than the biomass at the beginning of the same 10 year period;

Achieve catch reduction targets within three years.

It is important to acknowledge that in some sectors, the effects of management measures and the ability to estimate catch will be imprecise for Bocaccio and Yelloweye.

Once either stock has grown out of the critical zone, the standard IFMP process will be used to support the longer term objective, which is to:

Continue stock growth into the healthy zone.

8.0 MANAGEMENT MEASURES

Bocaccio

Based on updated science information, the Department has set out a near term plan for stepped reductions of total Bocaccio harvest from the estimated total catch mortality of 137 metric tonnes (MT) in 2012 to a mortality cap of 75 MT over 3 years (2013-14 to 2015-16). The mortality cap has been broken out to identify sector-specific mortality caps (see below). This plan accounts for aboriginal fishing opportunities.

Mortality cap (MT)	Sector-specific mortality caps				
	Mortality cap after FSC	Commercial groundfish trawl	Commercial groundfish hook and line	Commercial salmon troll	Recreation
75	74	61.9	4.7	3.6	3.5

Taking into consideration advice provided by fishing interests, the Department introduced new management measures and other strategies to help achieve the catch reductions described above.

The Department is working collaboratively with all fishing interests to achieve for Bocaccio conservation and rebuilding. For the salmon troll, recreational, and FSC fisheries, the current emphasis is on increasing awareness, given the limited data available on catch. Current work with these fisheries is focused on:

- Improving Bocaccio identification among fishers, technicians, guides, lodges, creel surveyors, and other catch monitors;
- Improving fishery monitoring and catch reporting for Bocaccio;
- Promoting the avoidance of Bocaccio;
- Identifying and implementing the tools required to conserve Bocaccio.

Commercial groundfish fisheries are already subject to 100% at sea and dockside monitoring, which helps ensure accurate recording of all catch. Additional management measures were introduced in 2013/14 for several commercial fisheries to further support Bocaccio rebuilding. A summary of these additional measures are listed below. Please refer to licence conditions and harvest plans in the appendices of this IFMP for more details:

- Groundfish trawl: the establishment of a TAC mortality cap, individual transferable quotas for each licence holder, and licence holdings caps; continuation of the voluntary program initiated by industry whereby groundfish trawl vessel masters donate all proceeds of all landed Bocaccio for use in groundfish research programs.
- Groundfish hook and line: the establishment of reduced Bocaccio trip limits.
- Salmon troll: the establishment of Bocaccio daily limits.

Following a 2014 review of the commercial groundfish fisheries' progress in reducing catch to meet the mortality caps, the measures for commercial groundfish fisheries were modified for the 2015/16 fishing season:

- the trip limit for Bocaccio in groundfish hook and line and trap fisheries was lowered from 200 lbs for the first 15,000 lbs of landed catch of the directed species to 100 lbs for the first 10,000 lbs of landed catch of the directed species²;
- the TAC mortality cap in the trawl fishery was reduced from 150 MT to 110 MT.

For the 2016/17 fishing season, the TAC mortality cap in the trawl fishery was further reduced from 110 MT to 80 MT.

Consistent with the stock assessment prioritization schedule in place for groundfish species, DFO will produce updated, peer reviewed Bocaccio stock assessments.

Yelloweye

Based on updated science information, the Department has set out a near term plan for stepped reductions of total Yelloweye outside population harvest from the estimated total catch mortality of 287 MT in 2014 to a mortality cap of 100 MT over 3 years (2016-17 to 2018-19). This plan accounts for survey catches and aboriginal fishing opportunities.

Taking into consideration advice provided by fishing interests, the Department will introduce initial management measures for 2016 to make steps towards the mortality cap described above and has committed to future discussions in 2016 to define a more comprehensive plan for achieving the 100 MT mortality cap. Initial management measures include a 39% reduction in the commercial groundfish TAC and slight adjustments to the spatial apportionment of the TAC among Groundfish Management Areas, based on advice from the Commercial Industry Caucus which considered survey trends and abundance and commercial fishery catch information. Apportionment of the TAC among outside Groundfish Management Areas for the 2016/17 season are set out below. These will be subject to more in depth review during the coming year to confirm a long term apportionment scheme.

Area	Share
3CD/5A	28.68%
5B	22.87%
5CD	20.93%
5E	27.53%

Initial management measures for 2016/17 also include a 33% reduction in recreational fishing opportunities, and a focus on improved reporting and avoidance of Yelloweye in the salmon troll fishery (retention of Yelloweye is already prohibited). The rebuilding plan will be expanded over the coming years to set out a longer term approach.

² The balance of the trip limit is adjusted accordingly: 100 lbs plus 1% of the amount of directed species landed in excess of 10,000 pounds, to a maximum of 600 pounds of Bocaccio.

9.0 COST BENEFIT ANALYSIS

Stock rebuilding efforts may be associated with socioeconomic costs. Due to the biological characteristics of Bocaccio and Yelloweye, rebuilding will be a long term initiative, and may constrain opportunities to harvest healthy species, given that Bocaccio and Yelloweye are caught as part of multi-species fisheries and when targeting other species.

The objectives and management measures developed for rebuilding Bocaccio and Yelloweye stocks have taken into consideration the socio-economic implications of planned management measures. The timeframe for recovery and the level of catch reductions have been established to balance the priority of rebuilding Bocaccio and Yelloweye while also allowing for fishing opportunities on healthy stocks that co-occur with these two stocks. The rebuilding approach has been developed with input from harvest sectors to help establish this balance with the intent that the management measures can be maintained over the long time frame likely required for a meaningful recovery.

In the long term, there will be benefits for harvesters to the rebuilding of Bocaccio and Yelloweye stocks, as healthy stocks will allow for the prosecution of relevant fisheries with fewer conservation constraints.

10.0 ROLES AND RESPONSIBILITIES

The Groundfish Management Unit is responsible for monitoring progress, leading performance reviews, and implementing management measures for commercial groundfish fisheries. The Groundfish Management Unit will also support recreational fishery managers in monitoring, reviewing, and implementing management for the recreational fishery. The Department's salmon troll fishery managers will be responsible for implementing and monitoring management measures for commercial salmon troll fisheries.

11.0 EVALUATION AND PERFORMANCE REVIEW

As outlined above in section 6, one of the key considerations DFO has identified for rebuilding these stocks is an adaptive management approach. This approach acknowledges the need to monitor progress against the milestones and objectives (described above) on an ongoing basis, and to adapt management where required to support rebuilding.

The current focus for commercial groundfish fisheries will continue to be on annual reviews of performance against the catch reduction targets. The annual review process consists of the following elements:

- Regular in-season reviews of catch to date through advisory processes, beginning in late summer each year. Survey trends will also be periodically summarized to inform decisions about whether the mortality caps themselves remain appropriate to achieve stock rebuilding.

- In the event that mortality caps are exceeded, DFO will consider additional measures or changes necessary to achieve the mortality caps for the next fishing season. Available measures that may be considered include area closures, temporal closures, individual quotas, reduced TACs, and trip or monthly limits, among others. Consultation on any additional measures will occur through the Commercial Industry Caucus and other groundfish fishery advisory boards in fall each year.
- Implementation of adjusted or new management measures. Primary tools for implementing changes will be licence conditions and / or the Groundfish IFMP, both of which are renewed for issuance on February 21st of each year.

Limited fishery monitoring and catch reporting programs in the recreational and salmon troll fisheries constrain the Department's ability to generate catch estimates for these fisheries.

Appendix 10: Fishing Vessel Safety

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1. OVERVIEW – FISHING VESSEL SAFETY

Vessel owners and masters have a duty to ensure the safety of their crew and vessel. Adherence to safety regulations and good practices by owners, masters and crew of fishing vessels will help save lives, prevent vessel damage and protect the environment. All fishing vessels must be in a seaworthy condition and maintained as required by Transport Canada (TC), WorkSafeBC, and other applicable agencies. Vessels subject to inspection should ensure that the certificate of inspection is valid for the area of intended operation.

In the federal government, responsibility for shipping, navigation, and vessel safety regulations and inspections lies with Transport Canada (TC); emergency response with the Canadian Coast Guard (CCG) and DFO has responsibility for management of the fisheries resources. In B.C., WorkSafeBC also regulates health and safety issues in commercial fishing. This includes requirements to ensure the health and safety of the crew and safe operation of the vessel. DFO (Fisheries and Aquaculture Management (FAM) and CCG) and TC through an MOU have formalized cooperation to establish, maintain and promote a safety culture within the fishing industry.

Before departing on a voyage the owner, master or operator must ensure that the fishing vessel is capable of and safe for the intended voyage and fishing operations. Critical factors for a safe voyage include the seaworthiness of the vessel, vessel stability, having the required personal protective and life saving equipment in good working order, crew training, and knowledge of current and forecasted weather conditions. As safety requirements and guidelines may change, the vessel owner, crew, and other workers must be aware of the latest legislation, policies and guidelines prior to each trip.

There are many useful tools available for ensuring a safe voyage. These include:

- Education and Training Programs
- Marine Emergency Duties
- Fish Safe – Stability Education Course
- Fish Safe – Safe on the Wheel Course
- Fish Safe – Safest Catch Program
- First Aid
- Radio Operators Course
- Fishing Masters Certificates
- Small Vessel Operators Certificate
- Publications:
 - Transport Canada Publication TP 10038 *Small Fishing Vessel Safety Manual* (can be obtained at Transport Canada Offices from their website at:

- <http://www.tc.gc.ca/eng/marinesafety/tp-tp10038-menu-548.htm>
- WorkSafeBC – Gearing Up for Safety, Safe Work Practices for Commercial Fishing in British Columbia
- WorkSafeBC – Occupational Health and Safety Regulation and associated Guidelines
- Safe at Sea DVD Series – Fish Safe
- Stability Handbook – Safe at Sea and Safest Catch – DVD Series
- Safest Catch Log Book
- Safety Quik

For further information see: www.tc.gc.ca/eng/marinesafety/menu.htm
www.fishsafebc.com
www.worksafebc.com

2. IMPORTANT PRIORITIES FOR VESSEL SAFETY

There are three areas of fishing vessel safety that should be considered a priority. These are: vessel stability, emergency drills, and cold water immersion.

1.2. Fishing Vessel Stability

Vessel stability is paramount for safety. Care must be given to the stowage and securing of all cargo, skiffs, equipment, fuel containers and supplies, and also to correct ballasting. Fish harvesters must be familiar with their vessel's centre of gravity, the effect of liquid free surfaces on stability, loose water or fish on deck, loading and unloading operations and the vessel's freeboard. Know the limitations of your vessel; if you are unsure contact a reputable naval architect, marine surveyor or the local Transport Canada Marine Safety Office.

Fishing vessel owners are required to develop detailed instructions addressing the limits of stability for each of their vessels. The instructions need to be based on a formal assessment of the vessel by a qualified naval architect and include detailed safe operation documentation kept on board the vessel. Examples of detailed documentation include engine room procedures, maintenance schedules to ensure watertight integrity, and instructions for regular practice of emergency drills.

The *Small Fishing Vessel Inspection Regulations* currently require, with certain exceptions, a full stability assessment for vessels between 15 and 150 gross tons that do not exceed 24.4 metres in length and are used in the herring or capelin fisheries. Once the proposed new *Fishing Vessel Safety Regulations* take effect, more vessels will be required to have a stability booklet.

In 2006, Transport Canada Marine Safety (TC) issued [Ship Safety Bulletin \(SSB\) 04/2006](#) ("Safety of Small Fishing Vessels: Information to Owners/Masters About Stability Booklets"), which provides a standard interpretation of the discretionary power available under Section 48 and the interim requirements prior to the

implementation of the proposed *Fishing Vessel Safety Regulations*. The bulletin calls for vessels more than 15 gross tons to have a stability booklet where risk factors that negatively affect stability are present. The bulletin also suggests vessels less than 15 gross tons assess their risk factors. Every fishing vessel above 15 GRT built or converted to herring or capelin after 06 July 1977 and engaged in fishing herring or capelin must have an approved stability book. Additionally Transport Canada has published a Stability Questionnaire (SSB 04/2006), and Fishing Vessel Modifications Form which enable operators to identify the criteria which will trigger a stability assessment. A stability assessment is achieved by means of an inclining experiment, which has to be conducted by a naval architect. Please contact the nearest Transport Canada office if you need to determine whether your vessel requires one.

In 2008, TC issued [SSB 01/2008](#), which sets out a voluntary record of modifications for the benefit of owners/masters of any fishing vessels. For vessels of more than 15 gross tons, the record of modifications was to be reviewed by TC inspectors during regular inspections and entered on the vessel's inspection record. However, information gathered during the Transportation Safety Board's (TSB) Safety Issues Investigation into the fishing industry showed minimal recording of vessel modifications prior to this date.

The TSB has investigated several fishing vessel accidents since 2002 and found that vessel modifications and loading of traps have been identified as contributing factors in vessel capsizings. Such as: [M02W0102](#) - *Fritzi-Ann*, [M05W0110](#) - *Morning Sunrise*, [M07M0088](#) - *Big Sisters*, [M08W0189](#) - *Love and Anarchy*, [M09L0074](#) - *Le Marsouin I*, [M10M0014](#) - *Craig and Justin*, [M12W0054](#) - *Jessie G* and [M12W0062](#) - *Pacific Siren*.

Vessel masters are advised to carefully consider stability when transporting gear. Care must be given to the stowage and securing of all traps, cargo, skiffs, equipment, fuel containers, and supplies, and also to correct ballasting. Know the limitations of your vessel; if you are unsure contact a reputable marine surveyor or the local Transport Canada Marine Safety office.

1.3. Emergency Drill Requirements

The Canada Shipping Act 2001 requires that the Authorized Representative of a Canadian Vessel shall develop procedures for the safe operation of the vessel and for dealing with emergencies. The Act also requires that crew and passengers receive safety training. The Marine Personnel Regulations require that all personnel on board required to meet the minimum safe manning levels have received MED (Marine Emergency Duties) training to an A1 or A3 level, depending on the vessel's voyage limits, within 6 months of serving aboard. MED A3 training is 8 hours in duration and is applicable to seafarers on fishing vessels less than 150 GRT that are within 25 miles from shore (NC2). MED A1 training is 19.5 hours duration and is applicable to all other fishing vessels.

MED provides a basic understanding of the hazards associated with the marine environment; the prevention of shipboard incidents; raising and reacting to alarms; fire and abandonment situations; and the skills necessary for survival and rescue.

1.4. Cold Water Immersion

Drowning is the number one cause of death in B.C.'s fishing industry. Cold water is defined as water below 25 degrees Celsius, but the greatest effects occur below 15 degrees. BC waters are usually below 15 degrees. The effects of cold water on the body occur in four stages: cold shock, swimming failure, hypothermia and post-rescue collapse. Know what to do to prevent you or your crew from falling into the water and what to do if that occurs. More information is available in the WorkSafe Bulletin *Cold Water Immersion* (available from the WorkSafeBC website at www.worksafebc.com), where the need to don PFD's while working in or near the water during fishing operations is clearly emphasized.

1.5. Other Issues

1.5.1. Weather

Vessel owners and masters are reminded of the importance of paying close attention to current weather trends and forecasts during the voyage. Marine weather information and forecasts can be obtained on VHF channels 21B, Wx1, Wx2, Wx3, or Wx4. Weather information is also available from Environment Canada website at: http://www.weatheroffice.gc.ca/marine/index_e.html

1.5.2. Emergency Radio Procedures

Vessel owners and masters should ensure that all crew are able to activate the Search and Rescue (SAR) system early rather than later by contacting the Canadian Coast Guard (CCG). It is strongly recommended that all fish harvesters carry a registered 406 MHz Emergency Position Indicating Radio Beacon (EPIRB). These beacons should be registered with the National Search and Rescue secretariat. When activated, an EPIRB transmits a distress call that is picked up or relayed by satellites and transmitted via land earth stations to the Joint Rescue Co-ordination Centre (JRCC), which will task and co-ordinate rescue resources.

Fish harvesters should monitor VHF channel 16 or MF 2182 Khz and make themselves and their crews familiar with other radio frequencies. All crew should know how to make a distress call and should obtain their restricted operator certificate from Industry Canada. However, whenever possible, masters should contact the nearest Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS) station (on VHF channel 16 or MF 2182 kHz) prior to a distress situation developing. Correct radio procedures are important for communications in an emergency. Incorrect or misunderstood communications may hinder a rescue response.

Since August 1, 2003 all commercial vessels greater than 20 metres in length are required to carry a Class D VHF Digital Selective Calling (DSC) radio. A registered DSC VHF radio has the capability to alert other DSC equipped vessels in your immediate area and MCTS that your vessel is in distress. Masters should be aware that they should register their DSC radios with Industry Canada to obtain a Marine Mobile Services Identity (MMSI) number or the automatic distress calling feature of the radio may not work. For further information see the Coast Guard website at: <http://www.ccg-gcc.gc.ca/e0003845>.

A DSC radio that is connected to a GPS unit will also automatically include your vessel's current position in the distress message. More detailed information on MCTS and DSC can be obtained by contacting a local Coast Guard MCTS centre (located in Vancouver, Victoria, Prince Rupert, Comox and Tofino) or from the Coast Guard website: www.pacific.ccg-gcc.gc.ca.

1.5.3. Collision Regulations

Fish harvesters must be knowledgeable of the *Collision Regulations* and the responsibilities between vessels where risk of collision exists. Navigation lights must be kept in good working order and must be displayed from sunset to sunrise and during all times of restricted visibility. To help reduce the potential for collision or close quarters situations which may also result in the loss of fishing gear, fish harvesters are encouraged to monitor the appropriate local Vessel Traffic Services (VTS) VHF channel, when travelling or fishing near shipping lanes or other areas frequented by large commercial vessels. Vessels required to participate in VTS include:

- every ship twenty metres or more in length,
- every ship engaged in towing or pushing any vessel or object, other than fishing gear,
- where the combined length of the ship and any vessel or object towed or pushed by the ship is forty-five metres or more in length; or
- where the length of the vessel or object being towed or pushed by the ship is twenty metres or more in length.

Exceptions include:

- a ship towing or pushing inside a log booming ground,
- a pleasure yacht **less than** 30 metres in length, and
- a fishing vessel that is **less than** 24 metres in length and not **more than** 150 tons gross.

More detailed information on VTS can be obtained by calling (604) 775-8862 or from the Coast Guard website: <http://www.ccg-gcc.gc.ca/e0003901>.

1.5.4. Buddy System

Fish harvesters are encouraged to use the buddy system when transiting, and fishing as this allows for the ability to provide mutual aid. An important trip consideration is the use of a sail plan which includes the particulars of the vessel, crew and voyage. The sail plan should be left with a responsible person on shore or filed with the local MCTS. After leaving port the fish harvester should contact the holder of the sail plan daily or as per another schedule. The sail plan should ensure notification to JRCC when communication is not maintained which might indicate your vessel is in distress. Be sure to cancel the sail plan upon completion of the voyage.

2. WORKSAFEBBC

Commercial fishing is legislated by the requirements for diving, fishing and other marine operations found in Part 24 of the Occupational Health and Safety Regulation (OHSR). Many general hazard sections of the OHSR also apply. For example, Part 8: Personal Protective Clothing and Equipment addresses issues related to safety headgear, safety foot wear and PFDs. Part 15 addresses issues on rigging, Part 5 addresses issues of exposure to chemical and biological substances, and Part 3 addresses training of young and new workers, first aid, and accident investigation requirements. Part 3 of the Workers Compensation Act (WCA) defines the roles and responsibilities of owners, employers, supervisors and workers. The OHSR and the WCA are available from the Provincial Crown Printers or by visiting the WorkSafeBC website: www.worksafebc.com

For further information, contact an Occupational Safety Officer:

Bruce Logan	Lower Mainland	(604) 244-6477
Wayne Tracey	Lower Mainland	(604) 232-1960
Pat Olsen	Courtenay	(250) 334-8777
Mark Lunny	Courtenay	(250) 334-8732
Jessie Kunce	Victoria	(250) 881-3461

or Mike Ross, the Regional Manager of Interest for Marine and Fishing, Victoria, (250) 881-3419.

For information on projects related to commercial fishing contact Ellen Hanson, Industry and Labour Services, Richmond: (604) 233-4008 or Toll Free 1-888 621-7233 ext. 4008 or by email: Ellen.Hanson@worksafebc.com.

Report all near misses or incidents: 1-888-621-7233

Report injury claims: 1-888-967-5377 or #5377 on your cell phone

3. FISH SAFE

Fish SAFE encourages vessel masters and crew to take ownership of fishing vessel safety. Through this industry driven and funded program, Fish SAFE provides fishing relevant tools and programs to assist fishermen in this goal. The *Fish SAFE Stability Education Course* is available to all fishermen who want to improve their understanding of stability and find practical application to their vessel's operation. The *Safe on the Wheel Course* is designed to equip crewmen with the skills they need to safely navigate during their wheel watch. The Safest Catch Program along with fishermen-trained Safety Advisors is designed to give fishermen the tools they need to create a vessel specific safety management system.

Fish SAFE is managed by Gina McKay along with Program Coordinator, John Krgovich, Program Assistant, Dionne Riley, and fishermen Safety Advisors. All activities and program development is directed by the Fish SAFE Advisory Committee (membership is open to all interested in improving safety on board). The advisory committee meets quarterly to discuss safety issues and give direction to Fish SAFE in the development of education and tools for fishermen.

Fish SAFE also works closely with WorkSafeBC to improve the fishing injury claims process.

For further information, contact:

Gina McKay	Phone: 604-261-9700
Program Manager	Cell: 604-339-3969
Fish SAFE	Fax: 604-275-7140
#2, 11771 Horseshoe Way	Email: fishsafe@fishsafebc.com
Richmond, BC V7A 4V4	www.fishsafebc.com

4. TRANSPORTATION SAFETY BOARD

The Transportation Safety Board (TSB) is not a regulatory board. The TSB is an independent agency that investigates marine, pipeline, railway and aviation transportation occurrences to determine the underlying risks and contributing factors. Its sole aim is the advancement of transportation safety by reporting publicly through Accident Investigation Reports or Marine Safety Information Letters or Advisors. It is not the function of the Board to assign fault or determine civil or criminal liability. Under the TSB Act all information collected during an investigation is completely confidential.

In 2012, the TSB released the results of a three-year investigation into fishing safety in Canada. This report identifies 10 key factors and makes several suggestions to address the problems that persist throughout the industry. In 2013

the TSB released investigation reports on two prawn fishing vessels the Jessie G and the Pacific Siren. In 2014 the TSB released the investigation report on the collision between fishing vessel Viking Storm and US fishing vessel Maverick.

For more information about the TSB, visit its website at www.tsb.gc.ca. For information about the TSB's investigation into fishing safety, or to view a brief video, visit

<http://www.tsb.gc.ca/eng/medias-media/videos/marine/m09z0001/index.asp>.

To view a brief video about some of the issues on the TSB's recent safety Watchlist, visit: <http://www.tsb.gc.ca/eng/medias-media/photos/index.asp>.

Reporting an Occurrence - [TSB 1808 Form](#)

After a reportable occurrence happens you can fill out the TSB 1808 Form or call the TSB at the contact information below.

Glenn Budden, Investigator, Marine - Fishing Vessels
Transportation Safety Board of Canada
4 - 3071 No. 5 Road
Richmond, BC, V6X 2T4
Telephone: 604-666-2712
Cell: 604-619-6090
Email: glenn.budden@tsb.gc.ca

Appendix 11: Commercial Groundfish Advisory Committee Contacts

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1. COMMERCIAL GROUNDFISH ADVISORY COMMITTEE CONTACTS

Department consults on a regular basis with advisory committees that represent the different sectors (Halibut, Groundfish Trawl, Sablefish and the Hook and Line fisheries). Membership includes selected licence holders representative, plus appointed members of the groundfish industry representing the full cross section of stakeholders involved in the industry (i.e. fish harvesters, processors, crewmembers, shoreworkers, coastal communities, and others). These committees meet regularly during the year to provide wide ranging advice to the Department to assist in the overall planning, management and enforcement of the each of their respective fisheries. Vessel owners and stakeholders are urged to communicate any comments or concerns to their appropriate advisory committee representatives for discussion at these meetings. The current members of each of these committees are as follows.

1.1. Halibut Advisory Board (HAB)

Name	Address	Phone	Email Address
Elected Commercial Members			
Terry Henshaw Annieville Halibut Association	9155 Hardy Road Delta, BC V4C 7V8	Phone (604) 581-9230 Cell (604) 341-3809 Fax (604) 581-1248	tonic1949@gmail.com
John Danroth Alternate, Annieville Halibut Association		Phone (604) 533-7028	
Bob Carpenter Annieville Halibut Association		Phone (250) 616-8172	
Alternate TBA Annieville Halibut Association			
Lorne Iverson B.C. Halibut Caucus	7950 Hunter Street Burnaby, BC V4C 7V8	Phone (604) 444-4461 Fax (604) 415-3999	lorneiverson@telus.net
Alternate TBA B.C. Halibut Caucus			
Alan Carl Northern Halibut Producers Association	212 5th Ave East Prince Rupert, BC V8J 1R7	Phone (250) 627-7942 Fax (250) 627-7592	porchers@citytel.net

Name	Address	Phone	Email Address
Josh Young Alternate, Northern Halibut Producers Association	6010 Garden Bay Road Madeira Park, BC V0N 2H1	Phone (604) 883-9468 Cell (604) 885-8113	joshyoung@dccnet.com
David Boyes Pacific Coast Fishing Vessel Owners' Guild	499 Powerhouse Road Courtenay, BC V9N 9L1	Phone (250) 338-2188 Fax (250) 338-2183	mcboyes@telus.net
Ken Erikson Alternate, Pacific Coast Fishing Vessel Owners' Guild	2378 Huband Road Courtenay, BC V9J 1S4	Phone (250) 338-6360	
Jim Nightingale Pacific Coast Fishing Vessel Owners' Guild	4420 Maple Lane Ladner, BC V4K 2Z5	Phone (604) 946-0947 Fax (604) 946-0947	jnightingale@dccnet.com
Don Roberts Alternate, Pacific Coast Fishing Vessel Owners' Guild			
Lyle Pierce Pacific Coast Fishing Vessel Owners' Guild	472 Condor Street Comox, BC V9M 1J7	Phone (250) 339 9508 Cell (250) 897-5409 Fax (250) 339 9568	lyle_p@shaw.ca
Alternate TBA, Pacific Coast Fishing Vessel Owners' Guild			
Quinton Sample Pacific Coast Fishing Vessel Owners' Guild			quintonsample@gmail.com
Alternate TBA, Pacific Coast Fishing Vessel Owners' Guild			
Jake Vanderheide Pacific Coast Fishing Vessel Owners' Guild		Phone (250) 246-9491 Fax (250) 246-2124	jcheide@telus.net
Alternate TBA, Pacific			

Name	Address	Phone	Email Address
Coast Fishing Vessel Owners' Guild			
Mike Wells Pacific Coast Fishing Vessel Owners' Guild	1909 Beaufort Ave Comox, BC V9M 1S3	Phone (250) 339-3717	mcwells@shaw.ca
Alternate TBA, Pacific Coast Fishing Vessel Owners' Guild			
Herb Van Grootel Stevenson Halibut Association	41 - 50th Street Delta, BC V4M 2S5	Phone 604-948-2831 Fax 604-948-2741 Cell 604-328-5555	herb.vg@telus.net
Henry Heggelund Alternate, Stevenson Halibut Association	P.O. Box 476 Sooke, BC V9Z 1H4	Phone: 250-642-3316 Cell: 250-216-0395	hheggelund@shaw.ca
Gary Williamson Wild Canadian Sablefish	4629 River Road West Delta, BC V4K 1R9	Phone (604) 946-6507 Fax (604) 946-6564	rivercat@telus.net
Alternate TBA, Wild Canadian Sablefish			
Appointed Members¹			
Environmental organizations TBA			
Environmental organizations Alternate TBA			
Trevor Russ Council of the Haida Nation, First Nations Fishery Council			trevor.russ@haidanation.com
Cliff Atleo Nuu-chah-nulth Tribal Council			cliff300@telus.net

¹ Appointed members subject to change following 2014 appointment process

Name	Address	Phone	Email Address
Philip Edgar Alternate, Nuu-chah-culth Tribal Council			
Jim Lane Nuu-chah-nulth Tribal Council			Jim.Lane@nuuchahnulth.org
Heather Gilroy International Pacific Halibut Commission	2320 West Commodore Way, Suite 300 Seattle, WA USA 98199-1287	Phone (206) 634-1838 Fax (206) 632-2983	heather@iphc.int
Bruce Leaman International Pacific Halibut Commission	2320 West Commodore Way, Suite 300 Seattle, WA USA 98199-1287	Phone (206) 634-1838 Fax (206) 632-2983	bruce@iphc.int
Paul Ryall International Pacific Halibut Commission Commissioner	#200-401 Burrard Street Vancouver, B.C. V6C 3S4		paul.ryall@dfo-mpo.gc.ca
Dave Boyes International Pacific Halibut Commission Commissioner	499 Powerhouse Road Courtenay, B.C. V9N 9L1	Phone (250) 338-2188 Fax (250) 338-2183	mcboyes@telus.net
Ted Assu International Pacific Halibut Commission Commissioner	690 Headstart Crescent Campbell River, BB V9H 1P9		tedassu@gmail.com
Christopher Sporer Pacific Halibut Management Association	#16046 617 Belmont Street New Westminster, BC V3M 6W6	Phone (604) 523-1528 Fax (604) 648-8737	phma@telus.net
Blake Tipton Processor, SM Products (B.C.) Ltd.	3827 River Road West Delta, BC V4K 3N2	Phone (604) 946-7665 Fax (604) 946-0176 Cell (604) 290-2454	Blake@Halibut.ca

Name	Address	Phone	Email Address
Kevin Parlee Processor Alternate, Harbour Marine Products Inc.			
Chuck Ashcroft Sport Fishing Advisory Board			chuckashcroft@telus.net
Doug Daugert Sport Fishing Advisory Board			kumdisisland2@yahoo.ca
Gerry Kristanson Sport Fishing Advisory Board			gerrykr@telus.net
John McCulloch Alternate, Sport Fishing Advisory Board			john.mcculloch@langara.com
Martin Paish Alternate, Sport Fishing Advisory Board			martin_paish@obmg.com
Russell Cameron Union, UFAWU/CAW	RR1 S-6 C-9 Madeira Park, B.C. V0N 2H0	Phone (604) 740-6434	russelljcameron@yahoo.ca
Garth Roberts Union Alternate	534 Evergreen Way Parksville, B.C. V9P 2B1	Phone (250) 248-2802	
Participant Observers			
Adam Keizer DFO Halibut Coordinator, HAB Chair	#200-401 Burrard Street Vancouver, B.C. V6C 3S4	Phone (604) 666-0912 Fax (604) 666-8525	adam.keizer@dfo-mpo.gc.ca
Devona Adams DFO Regional Rec Fish Coordinator	#200-401 Burrard Street Vancouver, B.C.		devona.adams@dfo-mpo.gc.ca

Name	Address	Phone	Email Address
	V6C 3S4		
Neil Davis DFO Regional Manager, Groundfish	#200-401 Burrard Street Vancouver, B.C. V6C 3S4	Phone (604) 666-9033 Fax (604) 666-8525	neil.davis@dfo-mpo.gc.ca
Robyn Forrest DFO Research Scientist	3190 Hammond Bay Road Nanaimo, B.C. V9T 6N7		robyn.forrest@dfo-mpo.gc.ca
TBA DFO Regional Groundfish Enforcement Coordinator			
Dennis Chalmers Province of B.C., Ministry of Agriculture, Sector Development Branch, Business Development Division	PO Box 9309 Stn. Prov. Govt. Victoria, BC V8W 9N1	Phone (250) 714-9887	dennis.chalmers@gov.bc.ca
Barron Carswell Province of B.C., Ministry of Agriculture, Agrifood Policy and Legislation Branch, Intergovernmental Relations	808 Douglas St. Victoria, BC V8W 9B4	Phone (250) 356-5042 Cell (250) 889-5166	barron.carswell@gov.bc.ca

1.2. Groundfish Trawl Advisory Committee (GTAC)

Elected Licence Holder Representatives			
Name	Address	Phone	Email Address
Mike Buston	8038 Lantzville Road Lantzville, B.C. V0R 2H0	Phone (604) 940-9111 Cell (604) 817-4131 Fax (604) 940-9295	mike@aqualinesfds.com
Brian Dickens	1130 Robertson Blvd, Parksville, B.C. V9P 1Y2	Phone (250) 248-1018 Cell: (250)726-8028 Fax (250) 248-1018	bldickens@shaw.ca

Name	Address	Phone	Email Address
Jim Harris	#22 447 Pym Street Parksville, B.C. V9P 2H9	Cell (250) 741-6744 Phone: Fax:	seajharris@shaw.ca
Ramon Donabetia	Box 2145 Port Hardy, BC V0N 2P0	Phone (250) 213-3680	rdun@live.ca
Gary Krause	1631 11 Avenue E, Prince Rupert, B.C., V8J 2X5	Phone (250) 627-1957 Cell: Fax (250) 624-3886	phantom@citytel.net
Shannon Mann	2295 Commissioner Street Vancouver, B.C. V5L 1A4	Phone (604) 468-7800 Cell: (778) 772-8238 Fax:	shannonmann@marineseafoods.com
Bob Morreau	1036 208 Street Langley, B.C. V2Z 1T4	Phone (604) 534-1760 Cell: (604) 725-9309 Fax (604) 534-2460	highline@telus.net
John Roach	1276 Best Street White Rock, B.C V4B 4E2	Phone (604) 536-1397 Cell (604) 880-2234 Fax (604) 535-7546	jrfishing@shaw.ca

Appointed members

Name	Address	Phone	Email Address
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Name	Address	Phone	Email Address
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1.3. Sablefish Advisory Committee (SAC)

Name	Address	Phone	Email Address
Elected Commercial Members			
Gary Williamson Canadian Sablefish Association, Longline representative		(604) 317-2977	rivercat@telus.net
Blair Pearl Alternate, Canadian		(604) 740-7451	bpearl@dccnet.com

Name	Address	Phone	Email Address
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Tim Joys Canadian Sablefish Association, Trap representative		(604) 240-5097	timjoys43@gmail.com
Deacon Melnychuk Alternate, Canadian Sablefish Association, Trap representative		(604) 813-1279	viking4@shaw.ca
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Kyle Brynjolfson Alternate, Canadian Sablefish Association, Trap representative		(778) 240-1463	shareekyle@gmail.com
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Name	Address	Phone	Email Address
Association, President			
Bob Fraumeni Canadian Sablefish Association, Vice President		(250) 661-9602	rghf@fasseafood.com
Environmental organizations TBA			
Environmental organizations Alternate TBA			
First Nations TBA			
First Nations Alternate TBA			
First Nations TBA			
First Nations Alternate TBA			
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Processor Alternate TBA			
Participant Observers			
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Name	Address	Phone	Email Address
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(TBA) DFO Regional Groundfish Enforcement Coordinator			
Province of B.C. TBA			
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Sean Cox Canadian Sablefish Association, Science Advisor	8888 University Drive Burnaby, B.C. V5A 1S6	(778) 782-5778	spcox@sfu.ca

2. COMMERCIAL INDUSTRY CAUCUS (CIC)

The groundfish commercial industry in conjunction with Fisheries and Oceans Canada and the Province of British Columbia established an advisory committee called the “Commercial Industry Caucus (CIC)” to discuss and formulate advice on issues that cross all commercial sectors in the development and implementation of the integrated commercial groundfish fishery. Members of CIC are selected by each of the DFO Groundfish Advisory Committees and fishing sectors to represent that sectors interests. The general mandate of CIC is provide a forum for open discussion in the development of consensus advice on reforms to the Groundfish IFMP including in season management actions. Members of CIC are as follows:

Name	Address	Phone	Email Address
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Name	Address	Phone	Email Address
Dan Edwards Appointed (Dogfish)	P.O. Box 469 Ucluelet, B.C. V0R 3A0	Phone (250) 726-4316 Fax (250) 726-2374	danedwards@telus.net
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Participant Observers			
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Neil Davis (Groundfish Management Unit)	Regional Manager, Groundfish, Fisheries and Oceans Canada 200 – 401 Burrard Street Vancouver, BC V6C 3S4	604 666-9033	Neil.Davis@dfo-mpo.gc.ca

2.1 Groundfish Hook and Line Sub Committee (GHLSC)

The Groundfish Hook & Line Sub-committee (GHLSC) is a forum for providing advice, and for communicating information and concerns, to Fisheries and Oceans Canada (DFO, the Department) on management and policy issues relating to the Lingcod, Dogfish and Rockfish (inside and outside) commercial fisheries in the Pacific Region. Advice will be forwarded directly to the Department on matters specific to the Lingcod, Dogfish and Rockfish fisheries and via the Commercial Industry Caucus (CIC) for matters that are inter-sectoral. This advice will be taken into consideration by the Minister to assist in the overall planning, management and enforcement of these fisheries. The Groundfish Hook and Line Sub-committee will serve as the forum for disseminating information from the Department back to the industry.

Name	Address	Phone	Email Address
Alvin Hui (Inside ZN)	1606 Hornby Street Vancouver, BC V6Z 2T4	Phone (604) 689- 1608 Fax (604) 739-2821	tiarafisheries@hotmail.com

Name	Address	Phone	Email Address
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Henry Heggelund (Outside ZN)	P.O. Box 476 Sooke, B.C. V9Z 1H4	Phone (250) 642-3316 Fax (250) 642-3076	hheggelund@shaw.ca
Dale Wick (Outside ZN)			
Herb Van Grootel (Outside ZN)	41 - 50 th Street Delta, B.C. V4M 2S5	Phone (604) 948-2831 Fax (604) 948-2741	herb.vg@telus.net
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Walter Lancashire - Appointed (Lingcod)	1450 Nursery Road Campbell River, B.C. V9W 4V5	Phone (250) 287-9229 Fax (250) 287-9202	walterlancashire@hotmail.com
Bob Burkosky - Appointed (Lingcod)	1466 Memory Lane Qualicum Beach, BC V9K 2A9	Phone (250) 752-5247	rburkos@shaw.ca
Dan Edwards- Appointed (Dogfish)	P.O. Box 469 Ucluelet, B.C. V0R 3A0	Phone (250) 726-4316 Fax (250) 726-2374	danedwards@telus.net
Rob Tadey DFO Chair	Hook and Line Co-ordinator DFO - RHQ #200-401 Burrard St Vancouver, B.C. V6C 3S4	Phone (604) 666-3279 FAX (604) 666-8525	robert.tadey@dfm-mpo.gc.ca

3. GROUND FISH INTEGRATED ADVISORY BOARD (GIAB)

Following initial discussions with interested sectors and resource users, the Groundfish Management Unit, Fisheries and Oceans Canada convened a Working Group in early 2009 to develop a draft terms of reference for an integrated advisory board for all groundfish interests. The Terms of Reference have now been finalized and are available at: <http://www.pac.dfo-mpo.gc.ca/consultation/fisheries-peche/ground-fond/giab-ccipf/index-eng.htm>. This structure is intended to support Fisheries and Oceans Canada's commitment to taking a more integrated and cooperative approach to addressing a wide range of issues in the management of the groundfish fisheries in BC, and contribute to sustainable commercial, recreational and Food, Social, and Ceremonial fisheries. The members of this advisory board are as follows:

Name	Interests	E-mail Address
Des Nobels <i>Skeena Queen</i> <i>Charlotte Regional District</i>	Coastal Communities	dnobels@citytel.net
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Bruce Turris	Commercial (Trawl)	bruceturris@shaw.ca
Brian Mose (Alternate)	Commercial (Trawl)	bmose@uniserive.com
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Terry Glavin (Alternate) Watershed Watch Salmon	Environmental	terry.glavin@gmail.com

Name	Interests	E-mail Address
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Appendix 12: Fishing Hazards Advisory

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1. NEPTUNE CANADA NETWORK, WEST COAST VANCOUVER ISLAND.....2

1. NEPTUNE CANADA NETWORK, WEST COAST VANCOUVER ISLAND

Ocean Networks Canada's NEPTUNE Observatory is deployed on the seafloor in the waters off the West Coast of Vancouver Island. The area involved is in the rectangular area bounded by 48 deg 40' N, 129 deg 10' W; 47 deg 40' N, 125 deg 16' W. The system layout is outlined in the included figure.

PLEASE BE AWARE that although we have made substantial efforts to bury the majority of the backbone cable and two 10 km heavy extension cables from the node at Barkley Canyon, **there remains some exposure in Folger Passage and Barkley Canyon areas.** At both sites the instruments are primarily located on the surface of the seafloor and are at high risk from trawling. Of particular note is a vertical profiler system with a suite of instruments that rises from the seafloor and breaches the sea surface and thus is at substantially higher risk. The vertical profiler is centred at 48° 25.6429' N and 126° 10.4493' W in 394 m of water. **Ocean Networks Canada has experienced two incidents of equipment damage in Barkley Canyon since the equipment was installed. Please avoid fishing in these areas** and refer to our information for Mariners pages and Electronic Navigational System files for upload for more details: <http://www.oceannetworks.ca/installations/notice-mariners>.

Ocean Networks Canada provides real-time data to people all over the world who influence public policy decisions, science, and public outreach. Benefits such as an advanced tsunami warning system, better understanding and recording of earthquakes, understanding ocean changes including spring phytoplankton blooms, oxygen levels, and trends in hypoxia highlight just a few of the potentials of this array. Real time data and more information, including notices to mariners, can be obtained on our website at www.oceannetworks.ca. We appreciate your support and cooperation in making this platform a success through its 25-year design life.

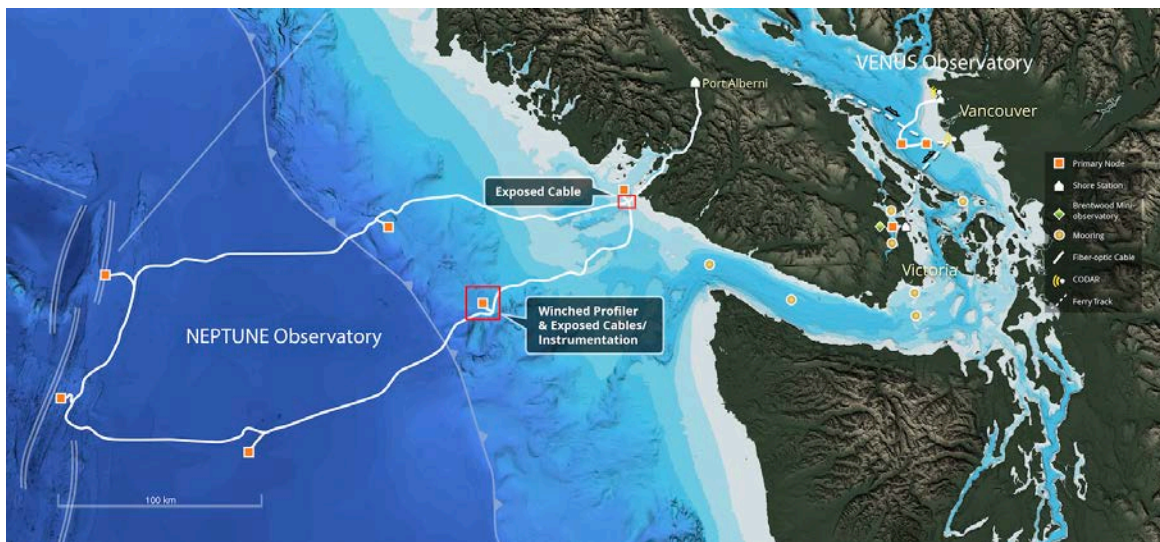


Figure 1. Ocean Networks Canada NEPTUNE Observatory areas of high risk to trawling. Additional caution should be exercised in areas indicated with a red box. (Bathymetry Data Sources: Saanich Inlet and Strait of Georgia bathymetry from Canadian Hydrographic Service; USGS Cascadia DEM report 99-369; University of Washington (UW), School of Oceanography, *R/V Thomas G. Thompson*, Multibeam cruise data - funding provided by KECK Foundation and UW; Plate Boundaries: Adapted from Dragert et al. Science, May 2001. Map adapted from original by: Center for Environmental Visualization, UW School of Oceanography.)